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Preliminary Report

on

Development of Economic Opportunities In Montana

for

Migratory and Stranded Families

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PRELIMINARY REPORT

ON

DEVELOPMENT OF ECONOMIC OPPORTUNITIES IN MONTANA

FOR

MIGRATORY AND STRANDED FAMILIES

- - - - -

Montana State Planning Board

Helena, Montana

October, 1939

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The Montana State Planning Board

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J. C. Taylor, Director, Montana Extension Service.

- - - - - -

Mont Resources
SEP 24 '64

IN CREATING THE MONTANA STATE PLANNING BOARD

THE MONTANA LEGISLATURE DECLARED:

"The public interest, welfare, convenience and necessity require the conservation and development of Montana's land, water, mineral, timber, coal, oil, and other natural resources for the social and economic advancement of the people of the state in accordance with a comprehensive plan to be developed concurrently with regional and national plans now being formulated by national planning bodies in cooperation with the several states.

"The State Planning Board, hereinafter created, shall be regarded as performing a governmental function in meeting this necessity, whereby, through the exercise of foresight, use of scientific knowledge and harmonizing all of the interests of the state, assistance may be given in solving the complex problems of Montana, thereby effecting more immediate stabilization of the agricultural, livestock, mining and other industries of the state and bringing about more efficient, economic and fuller use of the manifold resources of Montana.

"The State Planning Board shall be regarded as an agency for encouraging the formation and activity of local and district planning bodies in the state, whereby, the people of the several municipalities, communities, counties or regions may assume the responsibility of developing plans and policies in cooperation with the State Planning Board, which Board shall also be regarded as anagency to assist in putting all such plans and policies into actual operation."

In this declaration the Legislature presented the reasons for creating the Planning Board and placed broad responsibilities upon it.

AUTHORIZATION

Pursuant to directions of the President, the National Resources Committee has asked the Pacific Northwest Regional Planning Commission to arrange for a study of the land and migration problems in the Pacific Northwest States and to establish a channel or clearing house for the more effective coordination of programs, plans and policies of federal and state agencies concerned with migration and land settlement, reclamation, water conservation, employment and public works in the region.

This report by the Montana State Planning Board is made in cooperation with and as a part of the regional report by the Pacific Northwest Regional Planning Commission, with the assistance of a special advisory committee, composed of representatives of agencies chiefly concerned.

- - - - -

FOREWORD

This preliminary report on migratory and stranded families in Montana is an attempt to indicate the scope of the problem in the state, its principal causes, its social and economic consequences, the adjustments which have been made to date, a statement of resettlement opportunities for migratory and stranded farm families in the state, and some recommendations and suggestions for the future. The report contains data on the number of migratory and stranded families in the state of Montana, an estimate of the number of opportunities of re-establishing such families on irrigated tracts, and the approximate cost of such rehabilitation.

In recent years, the Pacific Northwest states have become the refuge of families from the drought areas, many of whom through no fault of their own have become destitute. This problem and the resulting general relief burden and drain on local taxpayers, and the extra load on school districts where these people have temporarily settled, make it imperative that something be done to relieve the situation.

The figures given in this report on numbers of migratory and stranded families have been compiled from various sources and represent the best estimates available. Further research and study will make available more complete and accurate data, but the estimates in this report are sufficiently accurate to indicate quite well the scope of the problem and its relative importance in the various areas of the state. It is hoped that this preliminary report will focus attention on the major factors to be considered in working out a program to improve the economic opportunities for these migratory and stranded families and result in eventual specific beneficial accomplishments.

The term "migratory and stranded" farm families in this report refers to those farmers who will need relocating or resettling if they are to become self-supporting. The "stranded" families are those still residing on sub-marginal agricultural land or located on a small piece of cut-over or other unsatisfactory land, or in town where they are on relief or have very inadequate incomes with which to support themselves. The "migratory" families are more of the transient type who squat in a locality for a season and have no settled place of abode. This report does not pretend to discuss all of the land use problems of the state for the hundreds of farm families who do not need relocating, but who would benefit from certain adjustments in the utilization pattern of land and water on the units they are now operating, or on contiguous lands. This latter group does not constitute such a critical or emergency-type problem as the former with whom this report deals primarily. However, the type of program which would be most beneficial for the migratory and stranded group would also benefit materially many other farm families by incidentally making more water available to them, and at the same time, reducing their tax burdens by making the migratory and stranded groups more self-sufficient and consequently less of a public expense.

The preliminary report is an attempt to present a state-wide picture focusing attention on some of the more important aspects of the problems of migratory and stranded families. As such it does not present the complete and detailed analysis of local community problems and recommendations which can and must be made by local county planning boards. The important work of planning local community adjustments must, in the final analysis, be based on local experience and judgment. When more detailed information is available a more complete state-wide picture can be made of local problems and needs.

The data for this report have been compiled from records of various agencies concerned with the problem and from many secondary sources. The following agencies have been particularly helpful in making basic data available for this report.

The United States Department of Agriculture:
- Farm Security Administration;
- Bureau of Agricultural Economics;
- Agricultural Adjustment Administration;
- Soil Conservation Service;
- Forest Service.

The United States Department of Interior:
- Bureau of Reclamation;
- Indian Service.

The Office of Government Reports.

The Works Progress Administration.

The Public Works Administration.

Montana Agencies:
- State Water Conservation Board;
- State Board of Equalization;
- State Public Welfare Department;
- State Employment Service;
- Division of Vital Statistics of the State Board of Health;
- Montana Agricultural Experiment Station;
- Montana Extension Service.

County Agencies:
- County Agricultural Planning Boards and selected County offices.

TABLE OF CONTENTS

Section		Pages
I	SUMMARY AND RECOMMENDATIONS	1-
II	THE PROBLEM	-12
	Net Migration out of Montana, 1920-1930	7-
	Estimated Net Migration into Montana, 1930-1935	-
	Total Employables Unemployed	-10
	Number and Distribution of Migratory and Stranded Farm Families	10-11
	Non-Repayable Expenditures Used in Whole or in Part for Emergency Relief	11-13
III	CAUSES OF THE MIGRATION OF FARM FAMILIES	13-17
	Conditions During the Settlement and Development Period Contributing to Heavy Migration	13-14
	Effects of Industrial Prosperity and Farm Conditions During the Twenties	14-15
	Agricultural and Business Conditions During the Thirties	15-16
IV	ECONOMIC AND SOCIAL EFFECTS OF MIGRATION AND MAL-ADJUSTMENTS IN RESOURCE UTILIZATION	17-22
	Bankruptcies and Foreclosures	-17
	Tax Delinquency	17-18
	Soil Erosion and Overgrazing	-18
	Lack of Development and Utilization of Water Resources	18-19
	FOREST AREAS	19-22
	Opportunity for Immediate Employment	19-20
	Stabilization of Lumbering and Forestry Employmen on a Permanent Basis	20-21
	Agricultural Development on Forest Lands	21-22
V	CORRECTIVE MEASURES	23-
	Adjustments by Public Agencies Which Have Already Been Effected or are now in Operation to Correct the Problems of Migratory and Stranded Population	-24
	Securing Effective Control and Conservation of Land Resources	24-
	Farm Security Administration	24-25
	The Soil Conservation Service	25-26
	P.W.A.-State Water Conservation Board	26-27
	WPA-State Water Conservation Board	-27

Section | Pages

The State Grazing Commission ..... -27
Montana Extension Service 27-28
The Montana Agricultural Experiment Station ..... -28
The Agricultural Adjustment Administration 28-30
Partial Summary ..... -30

VI OUTLINE OF OPPORTUNITIES FOR MIGRATORY AND STRANDED FAMILIES

Summation of Opportunities by Counties are Listed Alphabetically 31-88

APPENDIX TABLES

STATE MAPS

SECTION I

SUMMARY AND RECOMMENDATIONS

The contents of this report on migratory and stranded farm families may be briefly summarized as follows:

1. Montana received its greatest settlement and development during the years 1910 to 1920, a period of high prices, high yields, and a false conception of the value and agricultural possibilities of our semi-arid lands. Many of the homesteaders of this period completely lacked farm experience, and a substantial number of them settled upon land never designed by nature for grain farming.

2. From this boom period and the extensive attempt at improper use of so much land came the inevitable reversal of the 1920's, which was accentuated by unfavorable agricultural prices and yields. During this decade 60,000 people left the state, resulting in a net population loss for this census period of 11,000.

3. During the twenties great numbers of the agricultural population found employment in industry. This outlet for people from the farms was closed with the beginning of the business depressions in the Fall of 1929.

4. The above series of events, together with other contributing factors, produced the economic agricultural emergency of the 1930's and the extensive migration of farm families. There are now 9,000 of these migratory and stranded farm families in Montana. The migratory movement is generally westward. The migrants come from Montana and from other Great Plains states, and either stop in the irrigated and more humid sections of this state or continue on into Idaho, Washington and Oregon.

5. Because migrants have also come into Montana from other states, the migration into western Montana has been greater than the migration out of eastern Montana. Since 1930, the migration into the state has exceeded the outward migration by 2,000 or possibly 2,500 families.

6. On the basis of unemployment registration with the State Employment Service, there has been a gradual decrease of unemployment from 51,000 on July 1, 1934, to 27,500 on June 1, 1939. The remaining large number of unemployed (including migratory and stranded farm families) indicates a lack of opportunity for thousands of Montana families.

7. To meet this emergency situation, heavy expenditures have been made by various public agencies during the last few years. During the period from July 1, 1932, to June 30, 1939, $91,000,000 was spent for relief purposes by FERA, CWA, WPA, and FSA in Montana. In addition, nearly $13,000,000 was spent by PWA in the form of grants to create employment, and $20,000,000 was allotted as special grants by the Bureau of Public Roads for the same purpose, or a total federal expenditure of $124,000,000. The counties and state during this period spent in excess of $8,500,000 for relief, or a grand total for federal, state and county governments in excess of $132,000,000.

8. A certain portion of these expenditures for public

employment and direct relief was spent for regenerative water-conservation and land-utilization projects. The funds so used resulted in furnishing a water supply for 475,000 acres of land, construction of 180 irrigation reservoirs, 6,000 stock water reservoirs, 1,100 flood irrigation systems, 200 pumping installations, reseeding of 760,000 acres to grass, dyking and contouring of 45,000 acres of land, and the planting of millions of trees and shrubs. (See Section V, Partial Summary, page 30)

To the extent that they were used for the above types of projects, those funds were invested rather than expended, for these regenerative projects yield permanent benefits to the people of the state. Instead of giving temporary employment only, they also cause sustained employment of a permanent nature; they create new income, new wealth, and strengthen the tax-yielding power; and they lessen the need for future expenditures for emergency relief and public employment. During the preceding years only a part of the expenditures for public employment were made for these regenerative projects. The fact that a much greater portion was not so expended, is due primarily to the emergency character of the employment and relief needs, calling for immediate expenditures. In addition, there was at that time no prepared program of regenerative projects for the permanent improvement of economic conditions in the various localities of the state.

9. As shown in Section VI of this report, Montana has ample opportunity to select regenerative land-use and water-conservation projects to furnish public employment as well as resettlement locations for its migratory population. Without making new investigations for the purpose of locating resettlement opportunities, present available information as summarized at the end of Section VI of the report, discloses that 9394 locations are available for the resettlement of our migratory and stranded farm families, at a total cost for construction and resettlement expenditures, no greater than the amount heretofore expended for public employment and emergency relief. With 9,000 migratory and stranded farm families in the state, it seems most desirable that public employment be directed to such regenerative water-conservation and land-use projects, to facilitate the reestablishment of this population on a self-sustaining basis.

RECOMMENDATIONS

The migration problems in the Pacific Northwest are closely related to the land-use problems and agricultural instability in the Great Plains states. They are not strictly regional problems originating and developing within the Pacific Northwest, but to a large extent they are the result of the agricultural situation in the Great Plains states aggravated by the drouth.

Likewise, within the state of Montana, the concentration of hundreds of migratory and stranded families in western Montana is closely related to conditions in eastern Montana. Migration partly originates and partly ends within the state, and Montana must deal constructively with the major causes of migration out of eastern Montana as well as the resulting problems of migration into western Montana.

The migration movement from eastern Montana is due largely to:

1. The inexperience of a large number of homesteaders;

2. The false conception of the agricultural value of much of our grassland;

3. The subdivision of large tracts of grasslands into a great number of small ownerships, resulting in the elimination of the livestock rancher and placing the grain farmer on land upon which he could not make a living;

4. The unprecedented high agricultural prices and unsound values of the war period;

5. The low agricultural prices of the 1920's; and

6. The business depression of 1929 and succeeding years.

Some of these factors have been slowly and painfully eliminated. The inexperienced homesteader is gone. The false conception on the part of the public generally, and farmers and ranchers particularly, regarding the agricultural value and possibilities of our semi-arid lands has been largely removed. The consolidation of small units into larger ownerships or into larger operating units, has been and still is in process. However, the consolidation of operating units has proceeded much faster than the consolidation of ownerships. The recent grazing districts and soil conservation districts movement is an effort through group action to secure still more satisfactory use of land resources.

The last three of the above causes have not been eliminated, at least there is no assurance that they may not easily reoccur. Agriculture is suffering from the extreme instability of prices, and moreover, on the basis of population, its total income from year to year is roughly only half of what it should be as compared with the total national income.

These two economic evils of a low and irregular farm income must be remedied through a national agricultural adjustment program, if we are to prevent continued local and regional uprooting of the farm population, and instead bring strength to agriculture and stability to the farm population.

Agricultural income must be increased to its fair proportion of the national income and at that level must be safeguarded against extremely high as well as extremely low fluctuations. This is necessary to cure the maladjustments and acute problems of agriculture and it will also result in greater stability for business generally.

Agriculture is one of the first important activities of man, and upon it civilization has superimposed a large section of our industry and commerce. When the agricultural population came into the Great Plains region, the trades, professions, transportation, and business of all kinds followed them as a secondary movement and local towns sprang up everywhere. When the people began to leave the farms of the Great Plains, the same type of secondary movement again took place and many trades and business people left the towns. Good times on the farm made good business in the towns. The vacant stores and bank buildings in many rural towns are proof of what abandoned farms mean to business.

This evidence is plainly to be observed in the simply constructed business communities of the West, and while less readily discernible in the more highly developed communities and cities of the older parts of the country, nevertheless, the fundamental dependency of trade and industry upon agricultural production, income and buying power still fully operates.

The difficult problem of a low and extremely fluctuating agricultural income is energetically being dealt with by the Agricultural Adjustment Administration, with results sufficiently promising to recommend a continuation of its program along more and more effective lines, and towards the end that, on the basis of population, agricultural income will reach its fair proportion of the total national income, and that at this level it be held within reasonable bounds and safeguarded against great fluctuation.

AAA PROGRAM

First Recommendation

It is recommended that the National Administration continue to make every effort through the Agricultural Adjustment Administration to increase and stabilize agricultural income and buying power as a means of solving the agricultural problem and of advancing our national well being, prosperity, and business stability thereby.

LAND UTILIZATION AND RESETTLEMENT PROGRAMS

Second Recommendation

The Department of Agriculture should continue the acquisition of submarginal farmlands and their restoration to proper use (as is done in Montana, for instance, by turning them over to State Grazing Districts). Provision should be made at the same time for the acquisition of good irrigated farming lands for resettlement purposes, in the first place for those families who have become dispossessed of their submarginal farms, and also to make resettlement opportunities available for the large number of stranded and migratory farm families in the State.

A PUBLIC EMPLOYMENT PROGRAM OF REGENERATIVE PROJECTS

Third Recommendation

Because there is still need for the continuance of public employment in some form, and because there is ample opportunity in Montana to select regenerative land-use and water-conservation projects, it is recommended that the Federal Works Agency, to the fullest extent possible, adopt a policy of constructing regenerative projects in order to bring about better land utilization, increase permanent private employment and lessen the need for future expenditures for emergency relief and public employment; that first consideration be given to the selection of land-use and water-conservation projects which will make available resettlement opportunities for the migratory and stranded farm population. A work program of such projects

will not only reestablish the migratory and stranded farm population but will generally tend to locate a greater proportion of our population "under the ditch" with the advantage of greater economic stability, security and permanency and at the same time allow much of our non-irrigated areas to return to their original and best use--grazing. In such a program, opportunity must be given for a large degree of state and local direction in order to gain the fullest possible benefits from local experience and judgment.

CONSERVATION AND USE OF THE FORESTS

Fourth Recommendation

While the former recommendation deals primarily with the prairie sections of central and eastern Montana, a similar regenerative employment program is equally feasible in western Montana. It is founded on the conservation and use of the forests and the stabilization of forest industries. Much immediate and desirable work for the large number of migrant families in western Montana can well be done in the forests, such as elimination of fire hazards, reforestation, combatting tree diseases, development of stock water, fencing, road and trail construction, and so forth. In addition to the above work program, steps must also be taken to place the lumbering industry on a sustained basis of harvesting and manufacturing. The developed lumbering industry in the state is based on the exploitation and liquidation of timber stands, causing temporary peaks of local employment followed by the complete cessation of all work. Instead of this, the lumber industry should be regulated so as to assure permanency of the industry and employment by regulating the annual cut to approximately the annual timber growth. Lumbering should be practiced as a type of agriculture instead of mining. The difficult problems in western Montana, due to the influx of thousands of migrant families, can best be met by a water conservation and forest conservation program, by placing the logging and lumbering industry on a sustained yield basis, and by clearing and developing selected forest and cutover lands for farming and resettlement purposes. And all public employment in western Montana should be directed towards such projects.

OTHER RECOMMENDATIONS

In order to carry out the above recommend tions for a regenerative program in the most effective manner it is further recommended as follows:

Fifth Recommendation

That the National Resources Planning Board direct state and local planning groups to prepare a program of regenerative public works from which to meet the need for public employment, such as is suggested in Section VI of this report. Unless this is done we will, in our haste to meet the distress of the people, overlook the great opportunity to conserve our natural resources and bring about the permanent adjustments needed to improve local economic conditions. Such a prepared program of public works, large and small, and scattered as widely as possible

over the entire state, will make possible the expenditure of public grants or cooperative federal funds in a manner which will eliminate the need for these expenditures in the future. When carefully prepared in full consultation with local and state planning groups, it will assist in meeting in a constructive manner the present as well as any future need for public employment.

Sixth Recommendation

Because of the necessity of having a reliable inventory of our soils, it is recommended that the land classification work of Montana soils, under the direction of competent soils experts, be speeded up. At the present time, less than half of the counties in Montana have had a general soil reconnaissance by the soils division of the Montana Agricultural Experiment Station. Scientific soil classification data for all counties in the state is required for a sound agricultural and industrial planning program. Soil classification is particularly urgent for western Montana cutover lands at this time because increased land clearing activities by migrant farmers is in many instances carried on on lands which are definitely submarginal for agricultural purposes.

SECTION II

THE PROBLEM

Migration of both farm and city families from one residence to another within the same county, between counties, between states, or between nations, is not new to Montanans. Only a few years ago thousands of migrants poured into Montana from practically all parts of the United States and many foreign countries. This settlement was a part of the "go west young man" search for greater economic opportunities which free land and the western pioneer areas offered. The state was settled rapidly under the encouragement of favorable crop yields, high war prices, and huge foreign markets. Following the war, the industrial prosperity of the twenties coupled with declining yields and falling wheat prices, induced thousands to leave Montana to seek greater profits in the big industrial centers. Then, with the business crash in 1929, there resulted a backwash of hundreds of families from the cities to the farms or to the hometown,or to another state or region in search of a livelihood.

This latest migration is a forced, involuntary search for a subsistence and is in marked contrast to the earlier waves of voluntary western migrations to take up free land and carve out new communities in the wilderness and plains. In other words there is a lack of opportunity in contrast with an apparent former abundance of opportunities. No large foreign and expanding domestic markets are ready to take the products of these migrants as they were to take those of the earlier settlers. Poverty stricken and unable to get a crop or employment, they go on relief and constitute an acute problem requiring a definite, prompt program of action. The following report shows the size and distribution of this "migratory and stranded" population in Montana, and analyzes some economic opportunities for them which have been or may be developed through public and private activity.

Net Migration Out of Montana, 1920-1930

Montana was the only state in the Union to show a decline in population during the decade of the twenties. The Census listed 548,889 people living in Montana in 1920, and 537,606 in 1930, or a decline of approximately 2 percent during the decade. In other words, there were 11,283 fewer people living in the state in 1930. This figure does not give a true picture of the migration out of the state, however, because there was a net increase of 49,511 births over deaths in the state during the decade. 1/ Consequently, had there been no migration out or in, there should have been 598,400 people in the state in 1930 or 60,794 more than the 537,606 that were reported by the 1930 census. Thus migration out of Montana during the decade was sufficiently large to more than offset the excess of births over deaths (49,511) plus the number of people

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1/ Births in Montana for the ten years, 1921-1930, totaled 102,258 and deaths totaled 52,747, leaving a net excess of births of 49,511. (Data compiled from files of the Registrar of Vital Statistics, State Board of Health, Helena, Montana)

who moved into the state, and in addition cause a net decrease in total population of 11,283. The net migration of 60,694 people out during the twenties is more than 11 percent of the 1920 population, and shows that outward migration was very large. So great was this outward movement, that "ghost" towns and communities with their accompanying shrinkage in real estate values and personal fortunes, were common in some parts of the state, and particularly the eastern two-thirds.

Figure 1 shows the relative amount of net migration out of the state during the decade 1920 to 1930, by counties. Only 11 of the 56 counties showed an actual increase in the population over what it should have been had there been no migration in or out. In other words, there was a net migration into these counties, Toole County showing the largest increase with 68.5 percent, due to the oil producing development there. Note that with the exception of Powder River and Sheridan Counties, the areas of net inward migration are located in the more humid western third of the state. Observe that several of the central and eastern Montana dry land farming counties experience a net outward migration sufficiently large to reduce their 1930 population numbers from 32 to 44 percent below what they would have been had there been no migration in or out (see also Appendix table 1).

Estimated Net Migration into Montana, 1930-1938

No complete population census data are available after 1930, but an analysis of school population census data indicates that the migration out of the state has been checked during the thirties, and that a net inward movement has occurred. The school census data which are compiled by the school district clerks in October of each year, to show numbers of children under 6 years of age and 6 to 21 years old, indicate that there were 213,222 children under 21 years old in Montana in 1930, and 209,090 or 4,132 less in 1938. This decrease would, at first thought, seem to indicate a net outward migration, but this is not the case. Births, deaths, and age distribution of the population under 21 years old must be taken into consideration. In 1930 there were roughly 81,500 children 13 to 20 years of age, who, during the eight years 1930 to 1938, became over 21 years old and were therefore not included in the 1938 school census number. 2/ There were 79,135 children born and 8,029 children under 21 who died during the years 1930 to 1938, leaving a net increase due to excess of births over deaths of 71,106. Consequently, with the growing up of the 81,500 children to over 21 years of age who were 13 to 20 years old in 1930, there should have been a net decrease of around 10,000 in the number of children under 21 years old in 1938 compared with 1930. Instead there was an actual decrease of only 4,132 according to the school census. Obviously, there must have been a greater movement of families into the state

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2/ The 1930 Census shows 21,523 children, 14 or 15 years old, 20,468 children, 16 or 17 years old, and 28,383, 18, 19, or 20 years old, or a total of 70,374. The Census also shows 78,459 children from 7 to 13 years old, and 53,992 from 5 to 9, or an average of approximately 11,000 for each age year in these groups. Therefore, 11,000 was taken as the approximate number of children 13 years of age in 1930 and this added to the 70,374 gave approximately 81,500 children 13 to 20 years of age.

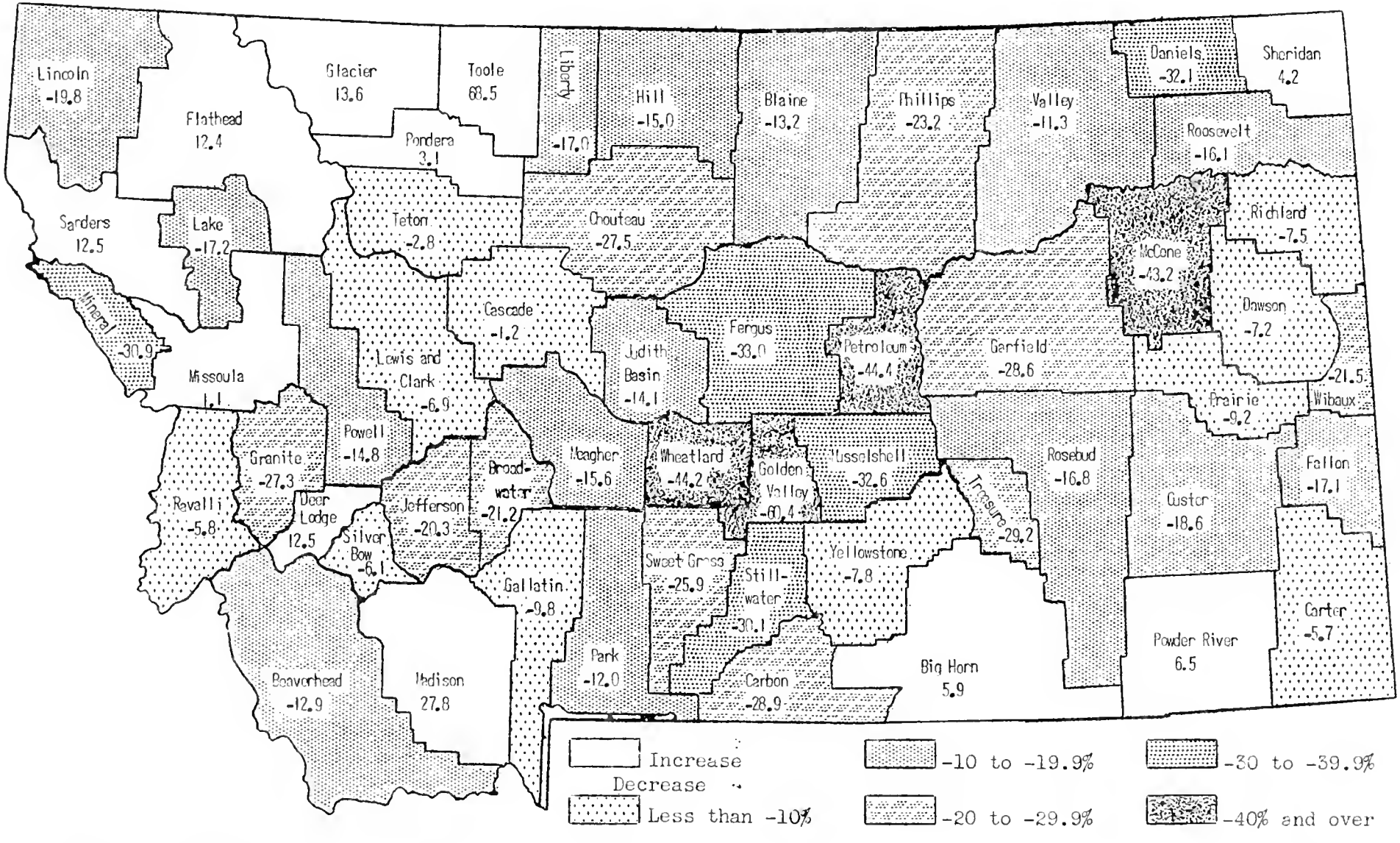

Figure 1.--Net changes in population due to migration, 1920 to 1930, by counties. The number of people (537,606) living in the state in 1930 was 11.1 per cent less than it would have been had there not been a net migration out during the twenties. (See Appendix Table I).

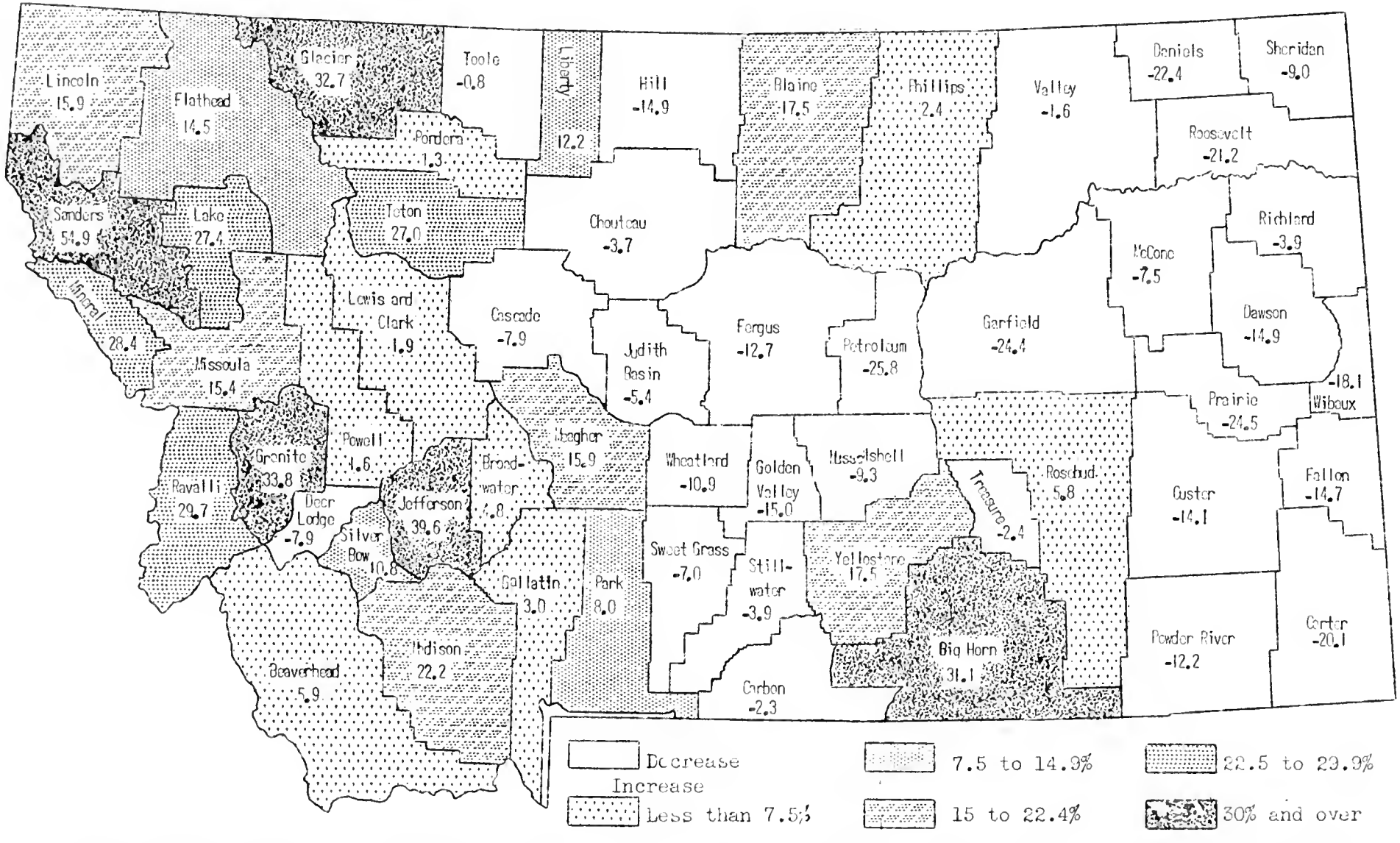

Figure 2.--Net changes in population under 21 years old due exclusively to migration, 1930 to 1938, by counties. The 1938 state total of 209,090 children under 21 is 3 per cent more than it would have been had there not been a net migration into the state during this period. (See the text for an explanation of the method used in computing migration changes.)

with children under 21 than the movement of such families out of the state during the 8-year period, otherwise, the school census numbers in 1938 would have been some 5,000 or 6,000 less than they were. This means that some 2,000 or possibly 2,500 families entered the state.

Figure 2 shows the above data by counties in the state. Note the relatively large increases in certain counties in the western, more humid third of the state (as much as 55 percent increase above the number there would have been in 1938 had there been no migration in or out in Sanders County), and the heavy declines in some of the eastern counties. The result of these appreciable shifts in population is to place a heavy burden of school costs and relief expenditures upon the western, net-migration-in counties, and to create a serious problem of decreased taxable wealth, abandoned homes, "ghost" communities and accompanying distress in some of the eastern counties. The migration out of these eastern counties is less than the migration into the western counties sufficient to cause a net increase in the 1938 numbers under 21 years old of 3 percent over the 1930 figures. Thus, it appears that people have also moved into the western cutover mountain and irrigated valleys of Montana from areas outside Montana during the thirties. (See Appendix Table II)

This indicated migration into the state during the thirties reflects the lack of economic opportunities in the cities and industrial areas which absorbed a net outward movement of some 60,783 Montana people during the twenties. It reflects a backwash movement from these cities and industrial areas to the farms and also a movement from the drought and grasshopper-stricken areas to the irrigated areas, the mountain valleys, and the more humid parts of the state, particularly the western third (see figure 2). 3/

Total Employables Unemployed

The best unemployment data available indicate that a large amount of unemployment exists in the state and reflect the general lack of satisfactory economic opportunity available to thousands of Montanans.

According to the Montana State Employment Service, more than 51,000 employable individuals in Montana were registered as unemployed on July 1, 1934. 4/ This is the equivalent of approximately a fourth (24 percent) of the total number of persons 10 years old and over who were gainfully employed in the state in 1930, as listed by the Census.

3/ Had there been the industrial and urban opportunities during the thirties which existed during the twenties, the net migration out would have been reflected in a smaller number of children under 21 in the state in 1938. It is significant that the number of children under 21 in the state declined from approximately 237,000 in 1920 to 213,000 in 1930, reflecting the heavy migration out during this decade.

4/ The number of employable individuals registered and available for work, according to the records of this agency, totaled 51,187 on

This number includes farmers and farm laborers unemployed and consequently includes a large number of the "migratory and stranded" farm families discussed in the following section.

A larger proportion of the number of males who were gainfully employed in 1930 were unemployed in 1934 than were females. The number of unemployed males on July 1, 1934, totaled 44,734 or 24 percent of the total number of males gainfully employed in 1930, while the number of unemployed women totaled 6,453 or 20 percent of the total number of females gainfully employed in 1930.

The total number of registered unemployed in Montana was less on July 1, 1938 than four years earlier (July 1, 1934), there being 37,887 registered as unemployed on July 1, 1938, compared with 51,187 on July 1, 1934. On December 31,1938, the number of registered unemployed was 33,180 or 15.3 percent of the total number of gainfully employed for the state as a whole in 1930. However, the proportion varied greatly between counties from less than 3 percent in Phillips, to over 32 percent in Golden Valley (see figure 3 and Appendix table III). On May 31, 1939 the number of registered unemployed was 27,499, or 17 percent less than on December 31, 1938. Thus it would appear that some improvement in the unemployment situation has been made from the 1954 levels, but the situation is still a very serious and unsatisfactory one.

Number and Distribution of Migratory And Stranded Farm Families

No complete enumeration has been made of migratory and stranded farm families in the state, but estimates and surveys made by Farm Security Administration officials, and county rehabilitation supervisors, county agents, county planning boards, county officials and others, are available. The result of these indicate that there are between 7,500 and 9,500 farm families in the state who can be classed as "migratory" or "stranded". That is, they are not now making their own living and are on submarginal lands or cut-over lands which are not capable of producing a living, or are stranded in town, or are living in trailer houses or moving from place to place very frequently. These numbers do not include the additional hundreds of Montana farmers who are at the present time on fundamentally good productive land and will not require relocating, but who need some additional land or supplementary feed through irrigation development or other land use adjustments to enable them to have a more stable and certain income.

Figure 4 shows the distribution of these migratory and stranded

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July 1, 1934, but Barclay Craighead, Chairman of the Montana State Employment Service, estimates that about 25 percent more unemployed reside in the state than the active files indicate. This estimate is based on a comparison of the number of unemployed registered with the State Employment Service, with the numbers shown by the unemployment census conducted by Presidential order in November, 1937. The active file of registrants of the Montana State Employment Service includes all persons of both sexes on WPA who are receiving relief of any kind, and on public works jobs, those employed only part time, as well as farmers, farm laborers, and miscellaneous unemployed.

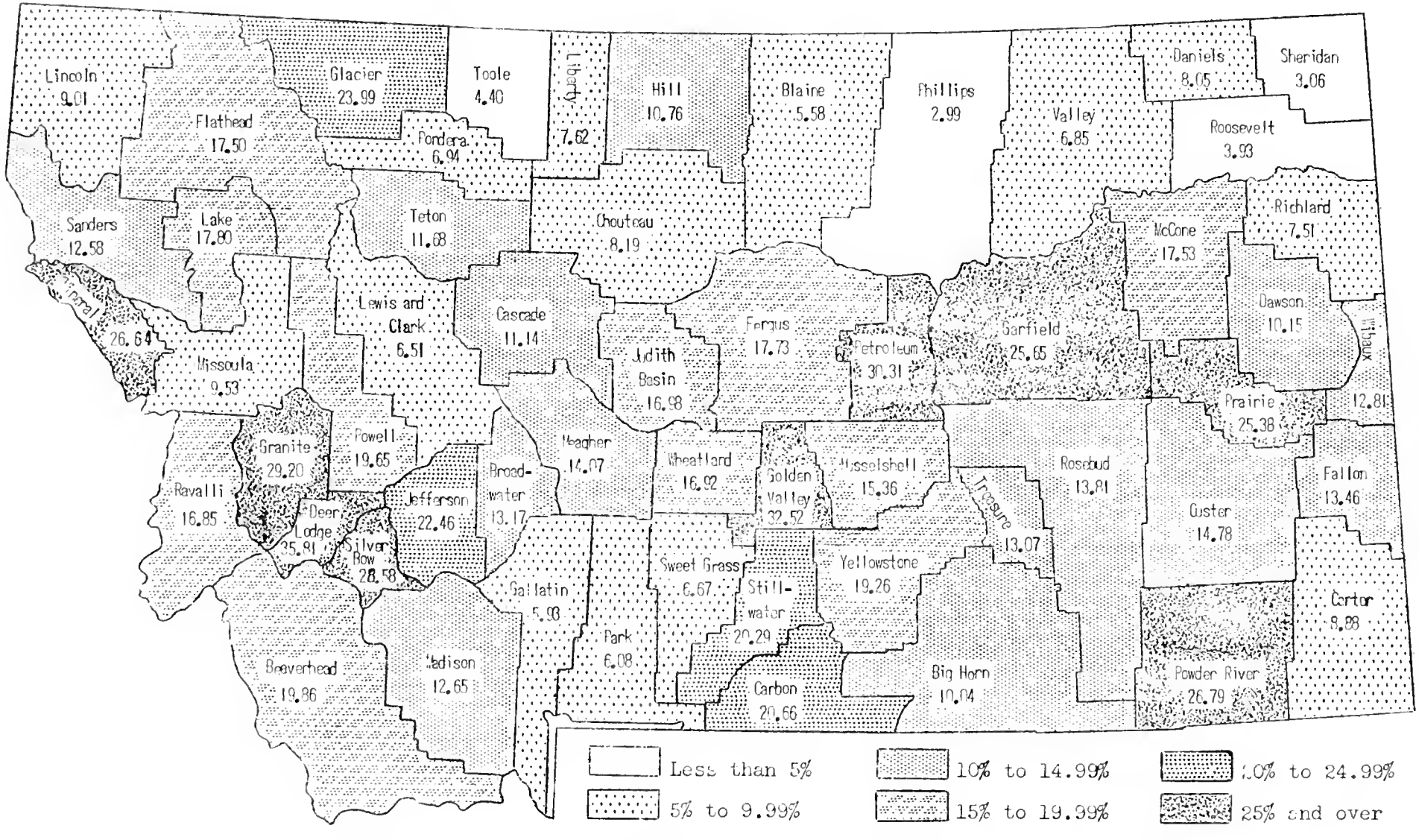

Figure 3.--Number of registered unemployed, December 31, 1938, in per cent of the number of gainful workers, 1930, by counties

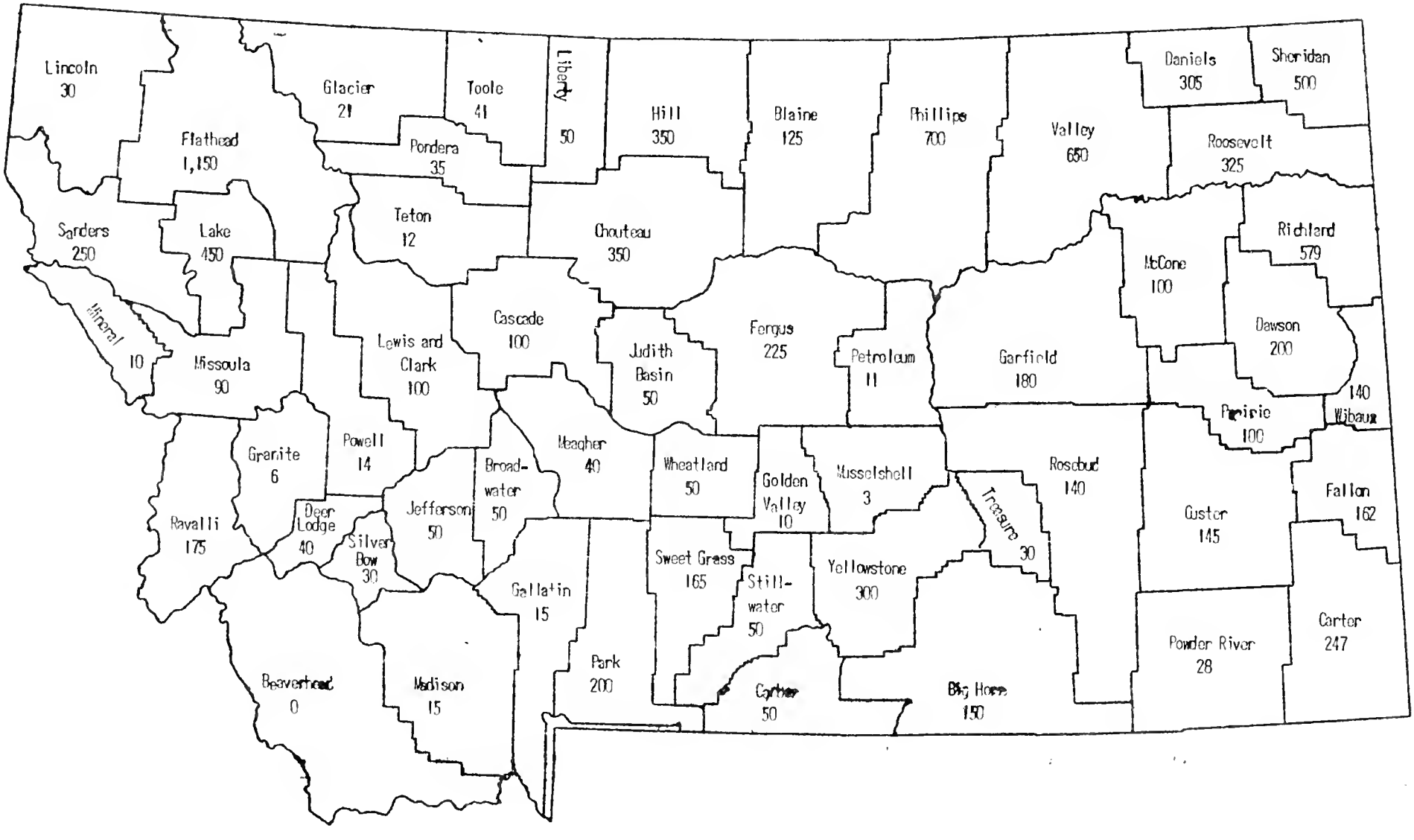

Figure 4.--Estimated number of migratory and stranded farm families as of May, 1939

families by counties in Montana. The numbers shown in each county are careful estimates and not actual numbers, since in practically no county has a complete and accurate enumeration been made.5/ The number of families shown represents a composite of data available from the sources noted in footnote 5. While considerable variation in accuracy undoubtedly exists between the counties due to difference in thoroughness and understanding of the problem by the leaders in the different counties, the state total of around 9,300 families is believed to be approximately correct. (However, it should be remembered that this figure is a preliminary estimate and much careful checking and further study should be done, particularly in selected areas of the state, to verify this figure). Observe the very large numbers of migratory and stranded farm families in the western cut-over and irrigated counties of Flathead, Sanders, Ravalli, and Lake, where hundreds of farm families have migrated with no basically sound, productive farm units upon which to settle. Note the large numbers of families in the eastern counties of Sheridan, Daniels, Valley, Roosevelt, Phillips, Richland, Dawson, Wibaux, Hill, and Carter who are stranded on unproductive units. Figure 5 shows the proportion which these stranded families make of the total number of farmers (1935 census numbers), by counties (See also Appendix table IV).

Non-Repayable Expenditures Used in Whole or in Part For Emergency Relief

Heavy expenditures have been made by various public agencies, in recent years to meet the acute problems caused by migratory and stranded farm families and the large number of unemployed who have been unable to secure self-supporting farm units or remunerative private employment. More than $78,000,000 have been spent in the state by the federal government alone for direct relief during the 6 fiscal years ending June 30, 1938. This amount represents the combined expenditures of the FERA, CWA, WPA, Farm Security Administration grants and Federal Surplus Commodities Corporation outlays.6/ In addition more than

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5/ Based on data secured from county planning boards from 42 counties on May 1, 1939, from a questionnaire survey conducted by FSA County Rehabilitation Supervisors in Montana in October and November, 1938, and the estimates of agricultural leaders and others familiar with Montana conditions. The Rehabilitation Supervisor's survey revealed 7,546 migratory and stranded farmers on farms. The reports of county planning committees indicate nearly 1000 stranded in towns and cities, and about the same number living in trailers or "on the wing" with no settled place of abode.

6/ Expenditures of these agencies for the six-year period are as follows: FERA $25,522,858; CWA $6,265,000; WPA $31,613,031; Farm Security Administration grants $9,831,530; and $4,41[illegible] 547 from ERA Acts of 1935, 1936, 1937, and 1938, not included in any of the above agency totals. Data are not available showing expenditures of the Federal Surplus Commodities Corporation for each of the fiscal years but in 1938 approximately $675,000 were spent. During the fiscal year ending June 30, 1939, the WPA spent an additional $15,000,000 of federal

$20,000,000 emergency relief funds have been used in public road construction; more than $15,000,000 were spent during these 6 years by the PWA in the form of grants; $22,673,099 by the Civilian Conservation Corps (CCC); $40,707,920 in the form of AAA benefit payments; $2,753,156 in the form of special grants by the Bureau of Reclamation; $505,153 by the U. S. Employment Service; and $94,743,683 for Rivers, Harbors and Flood Control expenditures (a large proportion of this was for Fort Peck). 7/

Figure 6 shows the combined per capita expenditures for direct relief (county poor fund and State Public Welfare expenditures for direct relief, FERA, Montana Relief Commission, CWA, WPA, PWA grants for work relief, and Farm Security Administration grants) for the period July 1, 1932, to June 30, 1939, by counties. Note that these expenditures total $112,099,306 and average $208.54 per capita for the state as a whole. Appendix table V shows the expenditures of these agencies by counties for this period.

In addition to federal non-repayable expenditures, the federal government has made loans of more than $112,000,000 in Montana through various agencies during the six years July 1, 1932, to June 30, 1938. 8/ These loans are all repayable and should not be confused with direct and work relief expenditures and non-repayable grants. Nevertheless, this heavy lending program totaling $112,121,840 for the six years, is evidence of the widespread lack of economic opportunities for stranded farmers and the unemployed in the state. Figure 7 shows per capita expenditures of the PWA by counties in Montana from its inception in 1934, to June 30, 1939. (See also Appendix table VI)

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funds in Montana, making a total expenditure for this agency since its inception on October 1, 1935, in excess of $46,000,000. (Data compiled from Report No. 9, "Direct and Cooperative Loans and Expenditures of the Federal Government, 1933-1938, Montana", prepared by the National Emergency Council, Mimeographed, May, 1939)

7/ Data compiled from Report No. 9, National Emergency Council, op. cit.

8/ Of the $112,121,840 loaned during these years, the Reconstruction Finance Corporation loaned $13,541,449; the Farm Credit Administration $78,860,944; the Farm Security Administration $5,076,276; the PWA $7,652,952; and the Home Owners Loan Corporation $7,390,219. (See Report No. 9, National Emergency Council, op. cit.)

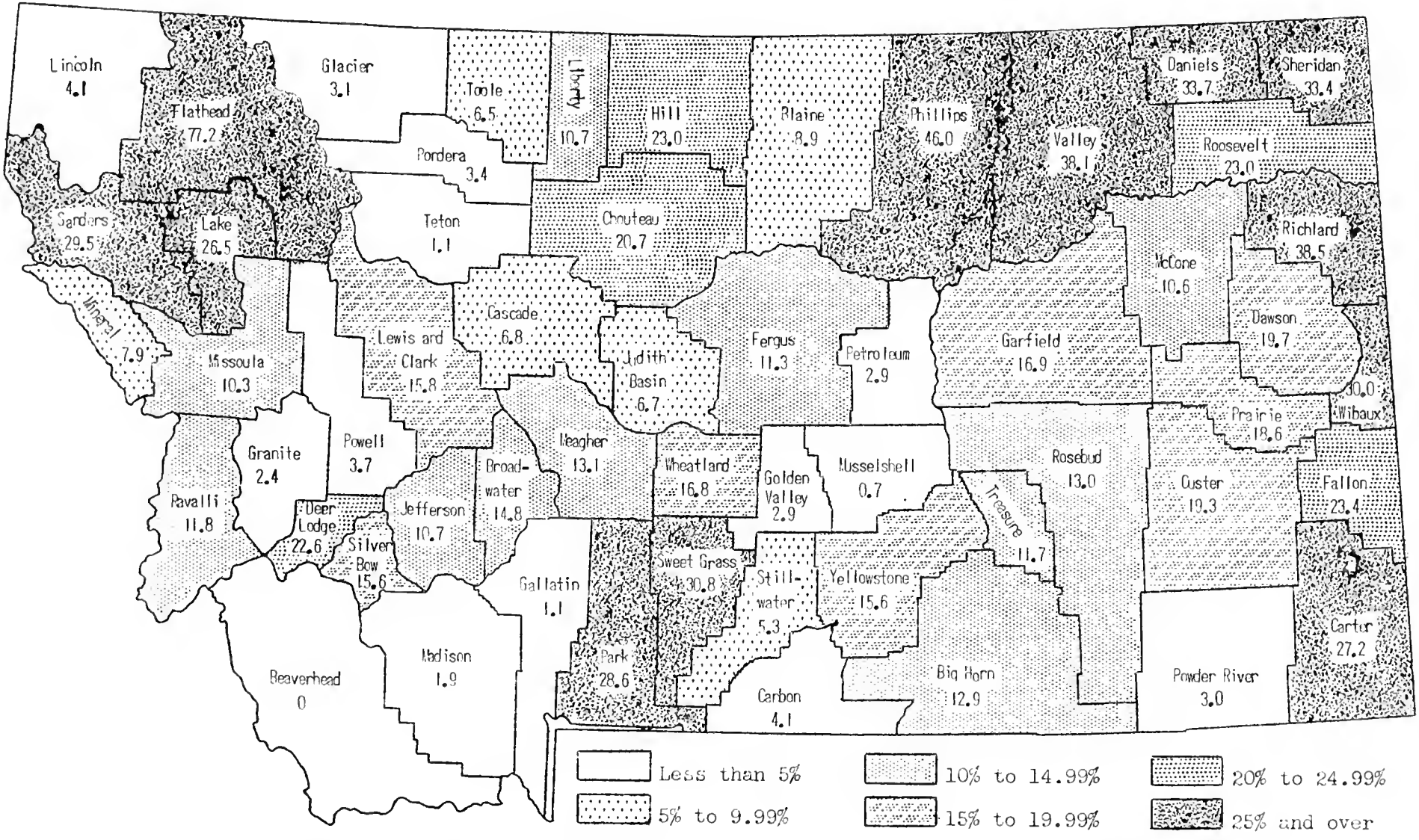

Figure 5.--Percentage which stranded and migratory farm families, 1939, make of the total number of farmers (1935 census) by counties. The state average is 16.6 per cent of all farmers. (See Appendix Table IV.)

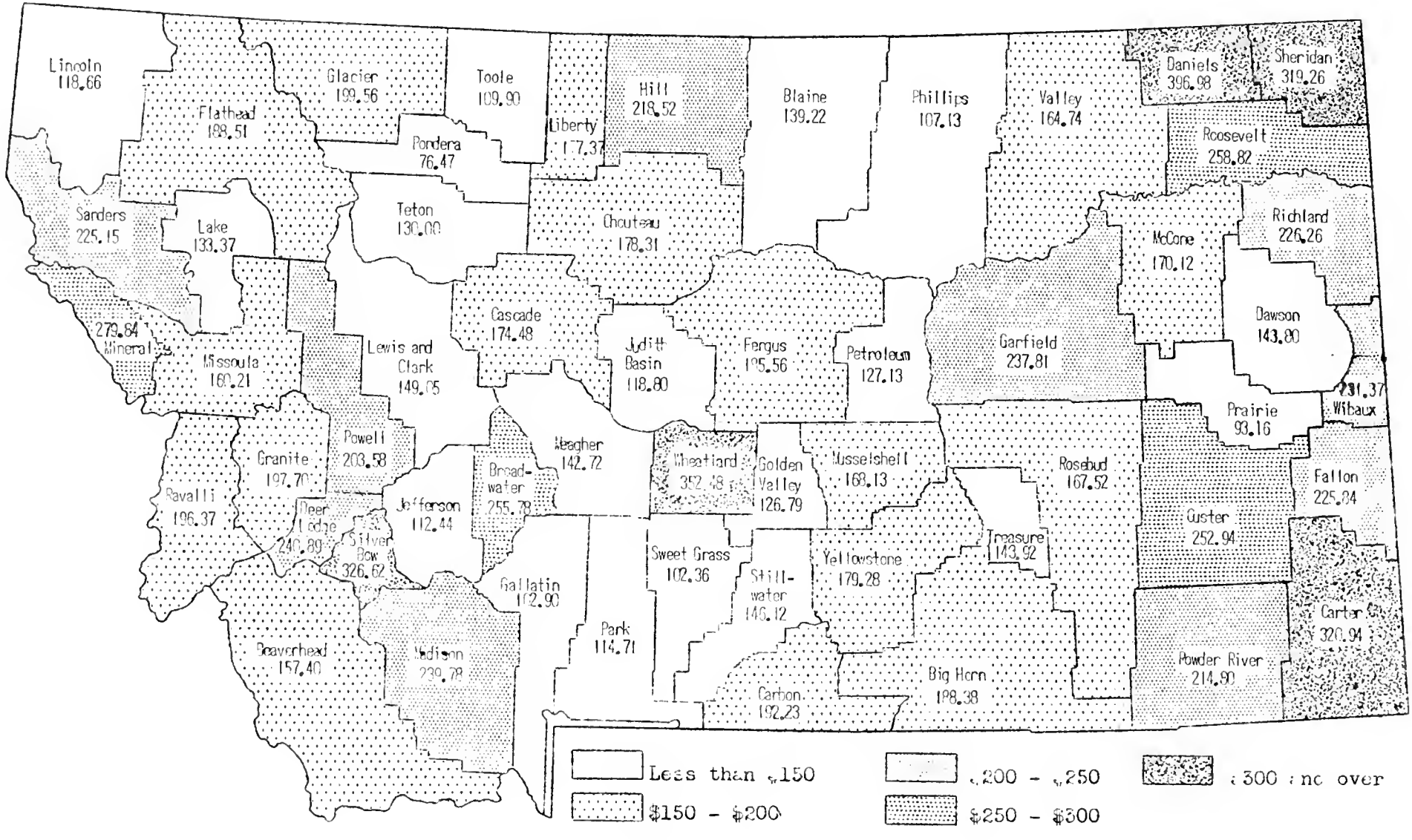

Figure 6.--Per capita expenditures for direct and work relief (County Poor Fund and State Welfare Board Expenditures for direct relief; W.P.A., C.W.A., F.L.R.A., and Montana Relief Commission Expenditures, P.W.A., and Farm Security Administration Grants).

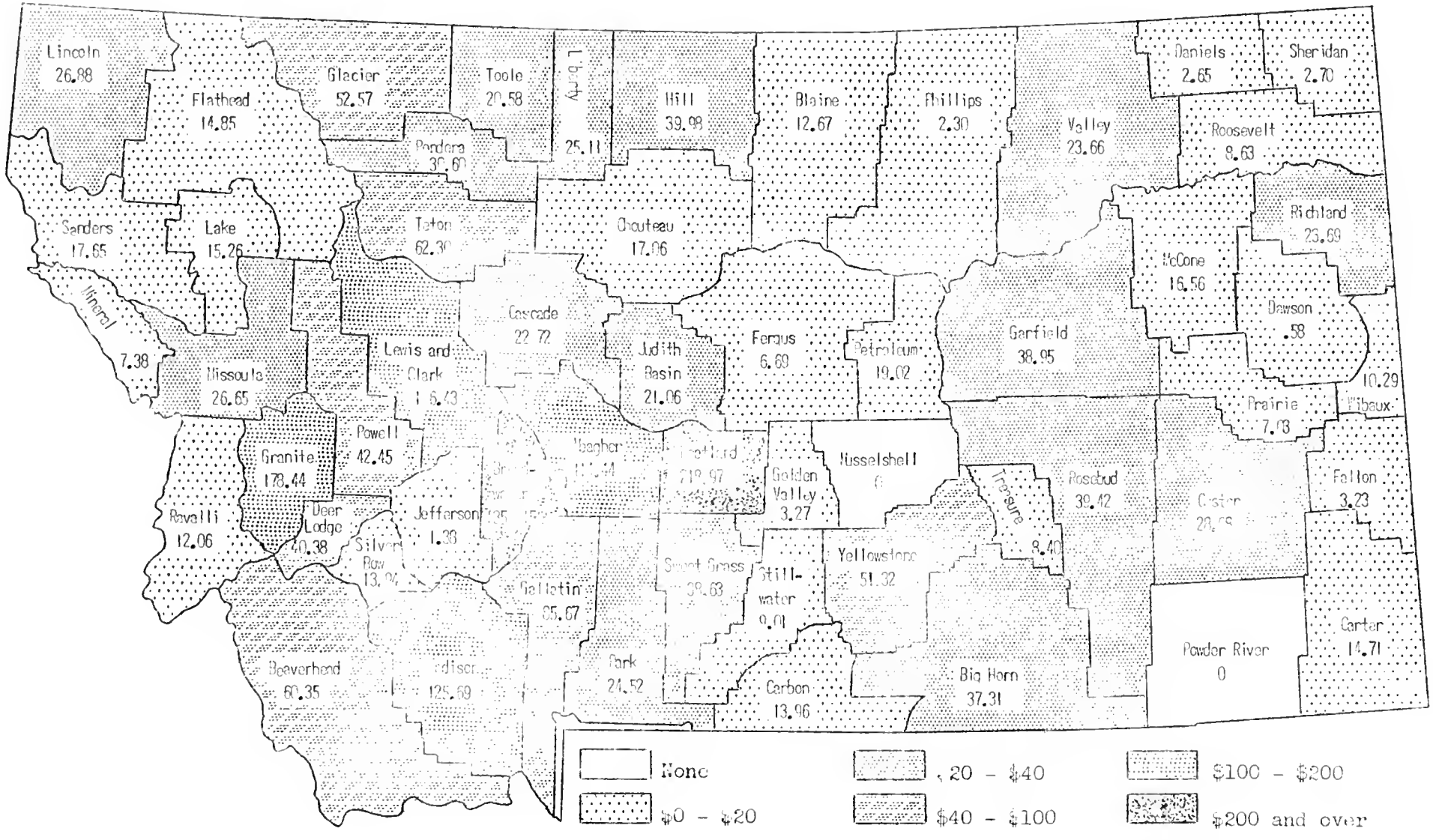

Figure 7.--Per capita P.W.A. expenditures (loans and grants in Montana by counties from the date of inception through June 30, 1939).

SECTION III

CAUSES OF THE MIGRATION OF FARM FAMILIES

The preceding pages have indicated the size of the stranded population problem in Montana, both as to numbers of people and their distribution throughout the state, and the relief and related expenditures resulting therefrom. This section will discuss very briefly the principal causes of the problem.

Conditions During the Settlement and Development Period Contributing to Heavy Migration 9/

The conditions existing during the period of heaviest settlement and development in Montana are, to a large extent, responsible for the high fluctuation in and instability of Montana's population. The period 1910-1918, the period of heaviest settlement and development, was characterized by rising prices, large wheat yields, rising land values, feverish optimism, and boom conditions in business. With no previous scientific analysis of the long-time producing ability of the soil, and without a rational appraisal of the usual or "normal" price and business conditions which could be expected, an abnormal level of land values, development, lending and borrowing was established which was definitely in excess of the long-time ability of the resources to support.

At the turn of the century (1900) the United States entered upon a period of business expansion and generally rising prices, culminating in the record breaking prices and business boom of the World War years. The birth rate was high (around 25 births per 1000 persons from 1910-1914) causing a large annual increase in the native population. Immigrants flocked in from abroad, an average of about 700,000 net immigrants (excess of arrivals in the United States over departures) being recorded annually during the period 1908-1914. (After 1914, the war in Europe checked immigration and during more recent years, restrictions have practically eliminated net gains through immigration, and the birth rate has dropped to less than 17 births per 1000 persons or to about what is required to maintain a stationary population).

The heavy increase in population caused property values, particularly land values, to soar. Many of the immigrants pushed west under the inducement of free homesteads and took up land in Montana for farming, together with the thousands who left the cities and other employment to get their share of the anticipated great profits of grain farming in the west. Large cattle ranches were divided into smaller farming tracts of 80, 160, or 320 acres.

The first crops were excellent, the fine virgin sod returning high yields per acre the first few years after breaking. The wheat yield

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9/ Many of the ideas in this section have been taken from Renne, R.R., "Montana Farm Bankruptcies", Mont. Agri. Expt. Sta., Bul. 360, June, 1938.

(wheat is the major crop) in the state for the 16 years 1900-1915, averaged over 25 bushels. Precipitation was comparatively good. The outbreak of the World War and the resulting increase in wheat prices further encouraged expansion of wheat acreage. During the 4 years 1917-1920, prices of all farm products averaged more than 10 percent above those of commodities bought by farmers. This favorable parity relationship was an added inducement to borrow heavily. The net result of all these favorable factors, plus vigorous encouragement by local merchants, bankers, investment and mortgage companies, railroads, and other developmental agencies, was a great development of farms and local governmental facilities including schools, roads, towns, and county government.

Thus during the period when Montana farmers were making their largest outlays for settling and developing their farms and communities, prices and land values were at an abnormally high level. During the 9 years 1910-1918, there were more than 33 million acres of homestead entries in Montana, or an average of almost 4 million acres annually. During these very years the general price level rose from an index of 100 in 1910 to nearly 200 by 1918 (or doubled), and to 225 in 1920. During the same period the value per acre of farm land and buildings for the country as a whole increased from less than $40 per acre to nearly $70. In this booming period there was little wonder that practically everyone had an exaggerated view of the true character of agriculture and its potentialities in this area. Heavy yields per acre convinced even some of the most stubborn of the cattlemen of the farming possibilities of land which they had insisted for many years was suited only for range.

Effects of Industrial Prosperity and Farm Conditions During the Twenties

The effect of settlement and development during such a boom period was not alone the incurring of a huge farm mortgage indebtedness in the state which, according to best estimates, totaled $155,000,000 in 1920, but also the attracting of a large number of settlers from all walks of life who had no previous training or experience for farming, such as deep sea divers, musicians, wrestlers, school teachers, blacksmiths, milliners, physicians, and others. 10/ When yields dropped to a record low in 1919 (2.4 bushels per acre on an average for the state) and prices dropped precipitously after 1920, farm bankruptcies and foreclosures increased rapidly. In other words, with the first pinch of severe economic difficulties, farmers began to leave the country in large numbers. The settlement and development of the previous decade had been

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10/ In a study of the "Triangle" area in North Central Montana in 1922, M. L. Wilson found that the settlers in a typical township in this area which, as far as soil and dry farming possibilities are concerned, was one of the best in the "Triangle", had the following former occupations: farmer 23; musician 6; maiden lady 3; deep sea diver, school teacher, physician, blacksmith, cowpuncher, drayman, wrestler, butcher, milliner, and jack-of-all trades, 2 each; miner, bartender, seagoing engineer, mail carrier, carpenter, and world rover, 1 each. (See Montana Extension Service Bul. 66, p. 28)

of such mushroom growth that many of the settlers did not have their roots firmly established or their farm practices adapted to the semi-arid conditions of the new area. Movement out of the country was further encouraged by the beginning of industrial prosperity in 1923 and extending to 1929, which has made alternative opportunities available in cities for those hardest hit on the farms. This coupled with unfavorable price conditions in agriculture caused heavy movement out of the state.

During the twenties the low wheat yields and low farm prices encouraged enlargement of the farm operating unit. From 1920 to 1930 the average size of farms in Montana increased from 608.1 acres to 940.3 acres. This consolidation of operating units was a forced adaptation to secure lower cost of production or change in land use so that farmers could operate profitably within the limits of lower prices they were receiving for their products. The thousands who were squeezed out in this adjustment process tried to find alternative opportunities in the cities, or in other areas. The development of more efficient tractors and the combine also enabled the average farmer to operate a larger unit and thus a considerable amount of technological unemployment in agriculture developed. However, the cities were able to absorb the surplus farm population because of the industrial prosperity of the twenties.

Installment purchases, large loans to bolster the European market, and a rising standard of living on the part of the American people enabled the expanding products of industry during the twenties to be absorbed. No such expanding market for farm products existed, and in addition several million acres which had formerly been used to produce feed for farm work animals were released through mechanization to produce food for human consumption. Increased efficiency in feeding meat animals and developing more efficient types and breeds of meat animals and shifts in the diet from products which required more land on a caloric basis to produce than others, all contributed to limiting the farm market and reducing farm prices generally.

Agricultural and Business Conditions During the Thirties

The severe business depression which began in the fall of 1929 caused heavy unemployment in industry. This checked the movement toward the cities and eliminated the alternatives available to distressed settlers. The failure of the European markets to continue to take American surplus farm and industrial products, due largely to the discontinuance of American loans to Europe, added to the severity of the depression. The failure of domestic purchasing power was due to a combination of events, the most important of which was the failure of purchasing power in the hands of the masses to keep pace with the expanded production due to technological and machine development, a declining birth rate and decreased immigration which slowed up the rate of increase in the number of consumers. Drought which began in Montana about the same time reduced Montana farm income to less than one-fourth of the 1924-1926 amount and to less than

one-sixth of the 1919 income. 11/ Continued drought, grasshoppers, and other insect pests reduced yields and the carrying capacity of the range to such an extent that a large cattle purchasing program was undertaken by the Federal government in southeastern Montana counties in 1934.

The world-wide business depression reduced the market for copper and other mining materials and a large amount of unemployment occurred in Anaconda, Butte, Roundup, Great Falls, Red Lodge, and other mining and industrial areas of the state. Construction generally, including housing, dropped to a new low during the depression so that the market for lumber and its by-products declined and unemployment in these areas followed.

Under the stresses and strains of such lack of economic opportunities in industry and farming combined, there was a backwash of hundreds of families who had moved to the cities to take advantage of industrial opportunities during the twenties to the home farm or home community during the thirties. The emphasis during the period after 1930 has been on securing a living or subsistence with the result that hundreds of families have moved to irrigated mountain valleys and to cut-over forest areas in the western third of the state or settled in abandoned farm homes, shacks in urban slum areas or other places which would afford shelter and a chance to get a livelihood through part time work, subsistence farming, or public relief.

11/ See Mont. Agri. Expt. Sta. Bul. 345, "Analysis of Montana Farm Prices", Aug. 1937.

SECTION IV

ECONOMIC AND SOCIAL EFFECTS OF MIGRATION AND MALADJUSTMENTS IN RESOURCE UTILIZATION

Some of the economic and social consequences of the conditions which developed during the years discussed in the preceding section are illustrated by the record of Montana farm foreclosures, bankruptcies and rural and urban tax delinquency in recent years.

Bankruptcies and Foreclosures

The record of farm bankruptcies in Montana during the twenties is the highest in proportion to total farms of any state in the Union, due largely to the fact that Montana's largest agricultural development occurred during the war, a period of high yields, high prices and exaggerated valuations and over-extension of credit. During that decade the unprecedented proportion of one bankruptcy to every 4 farms was recorded in some Montana counties. Over 3000 farmers lost their farms, any other resources they might have possessed, (and in most cases, their morale) and creditors lost some 35 million dollars in these Montana farm bankruptcies.

In the peak year 1924, a total of more than 1050 bankruptcies occurred, of which nearly 700 were farmers and the balance laborers, merchants, skilled workers, miners, and others. An average of nearly 3000 farm real estate mortgages were foreclosed annually during the decade of the twenties, and an average of nearly 4000 yearly during the 5 years, 1921-1925. Foreclosures since 1930 have averaged nearly 500 yearly or almost one percent of the total number of farms. In 1937 and 1938, 569 farm real estate foreclosures occurred in each year or in excess of one percent of the total number of farms in the state. These high rates are indisputable evidence of severe maladjustments and acute farm problems in Montana. Figure 8 and figure 9 show the distribution of farm bankruptcies and farm foreclosures in Montana.

The heavy rate of bankruptcies and foreclosures during the twenties was the adjustment which took out the excess capitalization which occurred largely during the war and settlement periods.

Tax Delinquency

A total of nearly 30 million dollars in delinquent taxes has accumulated in Montana. On July 1, 1938, nearly 19 million dollars in delinquent taxes were carried on the tax delinquency rolls of the counties, and an additional 11 million dollars of delinquent taxes were accumulated against lands to which the counties had already taken tax deed title and which they still hold. Montana counties now own almost 4 million acres of farm and ranch lands and hundreds of city and town lots which they have not been able to sell and from which in many areas they secure very little lease income annually.

The amount of accumulated tax delinquency in the form of tax deeded property and accumulated tax delinquency in percent of the taxable

valuation is shown by counties in Montana as of July 1, 1938, in figure 10 and appendix table VII. Figure 11 shows the location of county owned land in the state, and figure 12 shows the distribution of tax delinquent farm land in the state by counties.

Soil Erosion and Overgrazing

One of the most serious consequences of poor adjustment between man and his environment which has occurred in Montana is the improper use of the natural resources, particularly the soil. In many areas the usual operating unit is far too small to make an economic unit under a specialized dry land wheat farming system. Much land has been farmed which should not be farmed or farmed improperly with the result that soil blowing has occurred to a serious extent in several areas of the state. A soil erosion map classifying the soil blowing areas on the basis of their severity is shown in figure 13.

Another problem growing out of the drought, insect pest ravages and unplanned settlement, is overgrazing of the range. The highly commercialized form of agriculture which developed in Montana caused most stockmen to carry livestock numbers close to the maximum carrying capacity of the range under the best conditions or in many cases in excess of this maximum. The fact that in many areas the range was cut up into too many small operating units also encouraged exploitation of the soil and the range to a point beyond its normal carrying capacity. Ample feed reserves for bad years were not maintained; very little supplementary feed through irrigation development was available, with the result that during the drought and grasshopper ravages of the thirties the livestock were threatened with starvation and a large federal cattle and sheep purchasing program had to be inaugurated in certain parts of the state. Foundation herds were wiped out in many instances, and operators were left with no stock or resources to rebuild their operating units. This has encouraged further migration out of these areas through the former residents seeking alternative economic opportunities elsewhere. There has been no planned direction of such migration with the result that, for the most part, these migrants have squatted in western Montana counties and the Pacific coast areas in the hope of eking out a subsistence.

Lack of Development and Utilization of Water Resources

In the State Engineer's report on "Montana Water Resources", submitted to the Governor, November 10, 1938, it is estimated that only 4.03% of the annual stream flow of Montana (excepting Hudson Bay drainage) is actually consumed for irrigation. The highly commercialized and specialized type of farming and ranching which developed in Montana up to the thirties did not encourage the development of irrigated farming or of diversified livestock farming units. The drought and depression of the thirties has called attention to the need of developing more effectively the water resources of a community for the purpose of stabilizing farm enterprises through the production of gardens and supplementary livestock feed. In many areas stockwater reservoirs have been constructed with the assistance of various federal and state agencies and operators are beginning to see the need of further development of water resources.

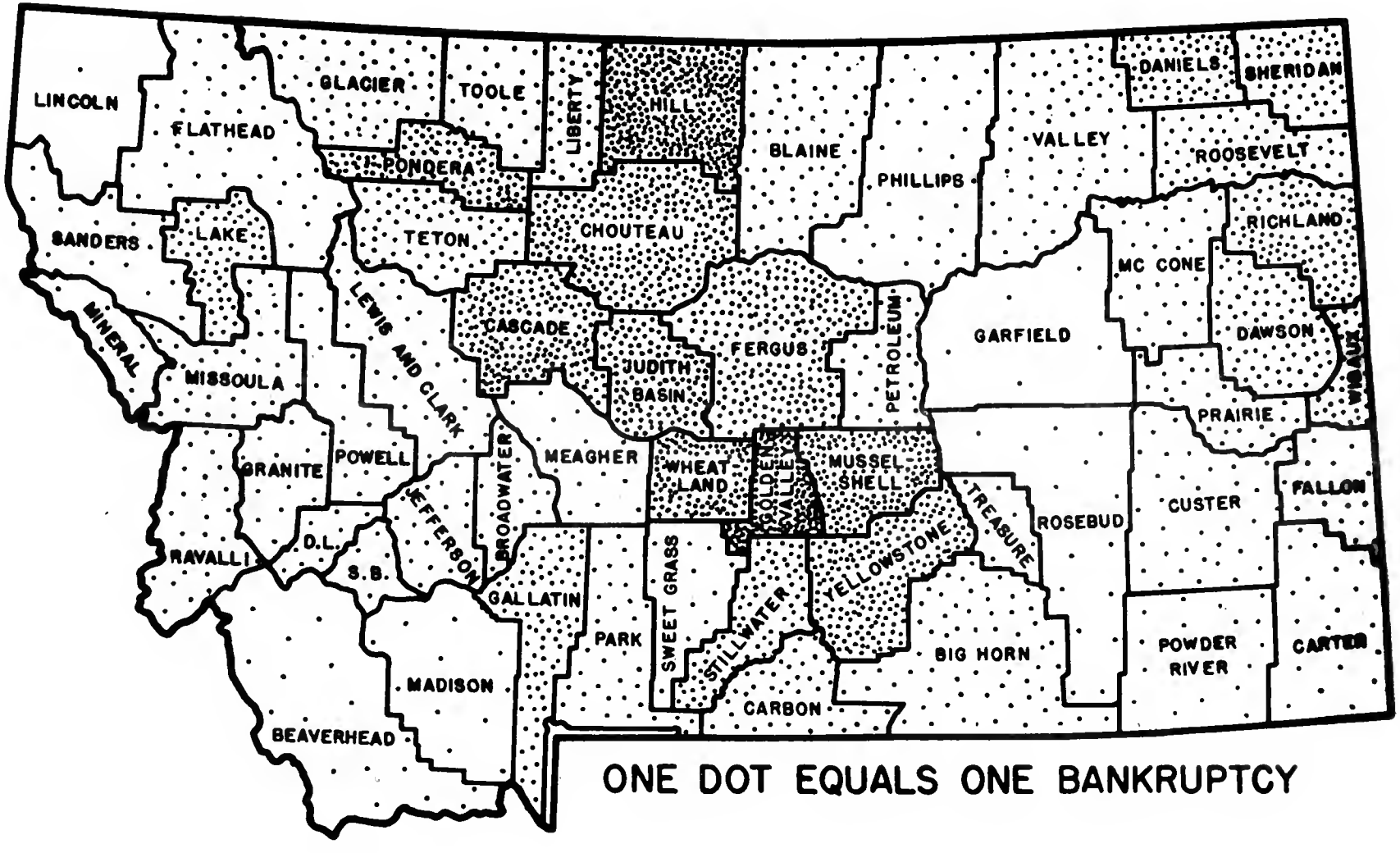
LINCOLN
FLATHEAD
GLACIER
TOOLE
LIBERTY
HILL
BLAINE
PHILLIPS
VALLEY
DANIELS
SHERIDAN
ROOSEVELT
PONDERA
TETON
CHOUTEAU
SANDERS
LAKE
RICHLAND
MC CONE
MINERAL
LEWIS AND CLARK
CASCADE
FERGUS
PETROLEUM
GARFIELD
DAWSON
MISSOULA
JUDITH BASIN
PRAIRIE
GRANITE
POWELL
MEAGHER
WHEAT LAND
GOLDEN VALLEY
MUSSEL SHELL
CUSTER
FALLON
JEFFERSON
BROADWATER
TREASURE
ROSEBUD
RAVALLI
D.L.
S.B.
YELLOWSTONE
GALLATIN
PARK
SWEET GRASS
STILLWATER
BIG HORN
POWDER RIVER
CARTER
MADISON
CARBON
BEAVERHEAD
ONE DOT EQUALS ONE BANKRUPTCY

Figure 8

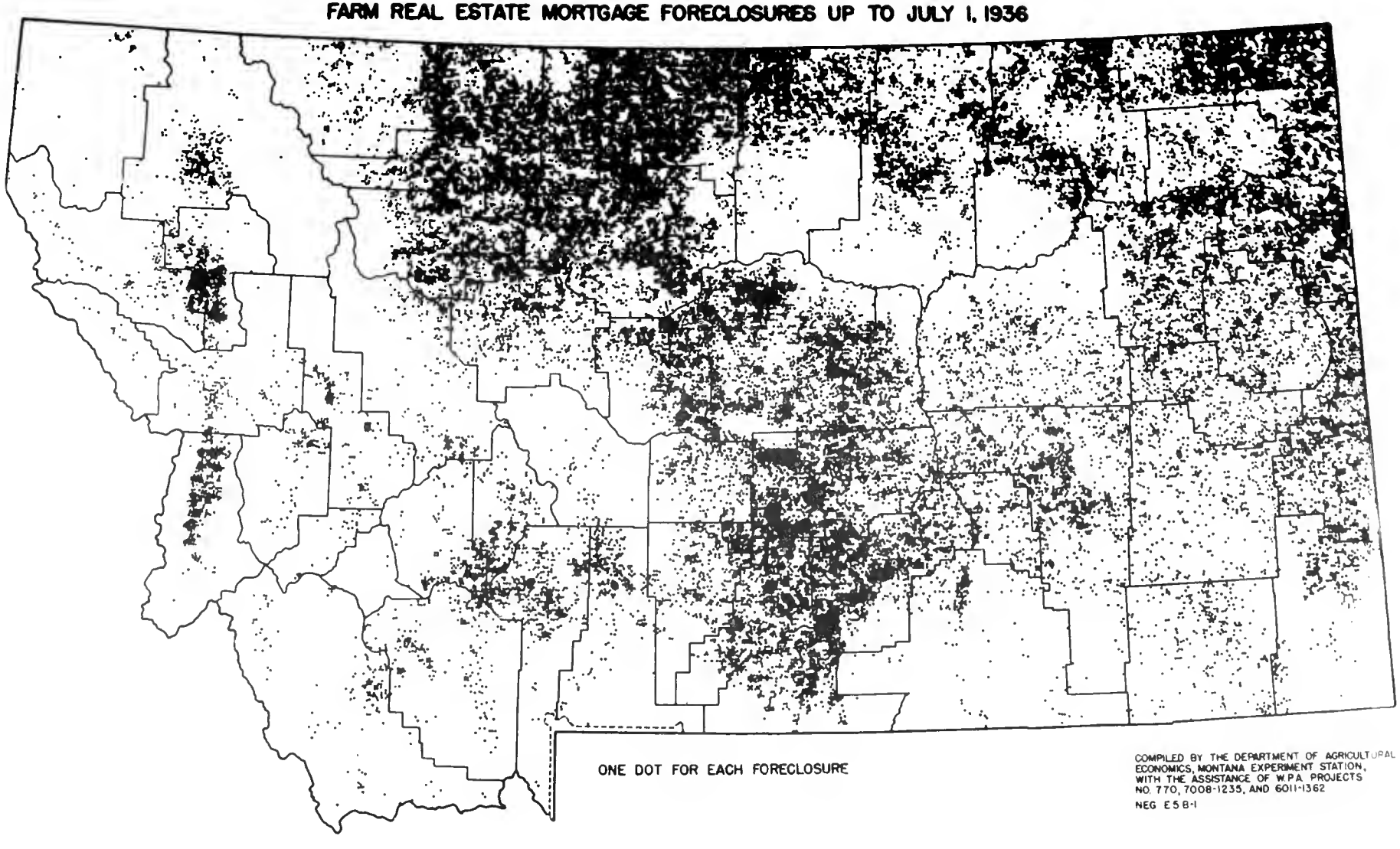
FARM REAL ESTATE MORTGAGE FORECLOSURES UP TO JULY 1, 1936
ONE DOT FOR EACH FORECLOSURE
COMPILED BY THE DEPARTMENT OF AGRICULTURAL ECONOMICS, MONTANA EXPERIMENT STATION, WITH THE ASSISTANCE OF W.P.A. PROJECTS NO. 770, 7008-1235, AND 6011-1362
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Figure 9

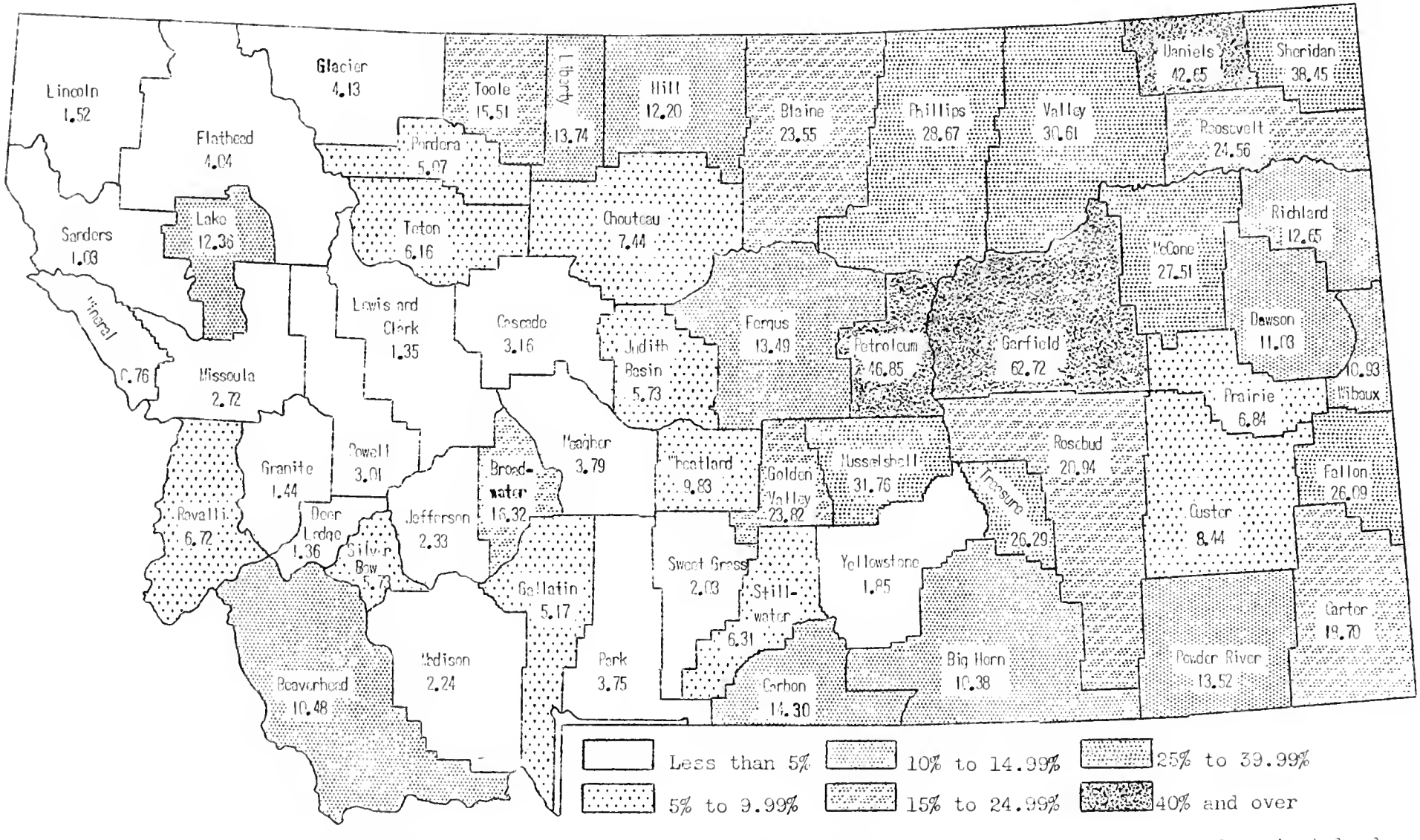

Figure 10.--Total accumulated tax delinquency (delinquent taxes receivable and taxes accrued against land acquired by tax deed) in per cent of total taxable valuation, by counties on June 30, 1938

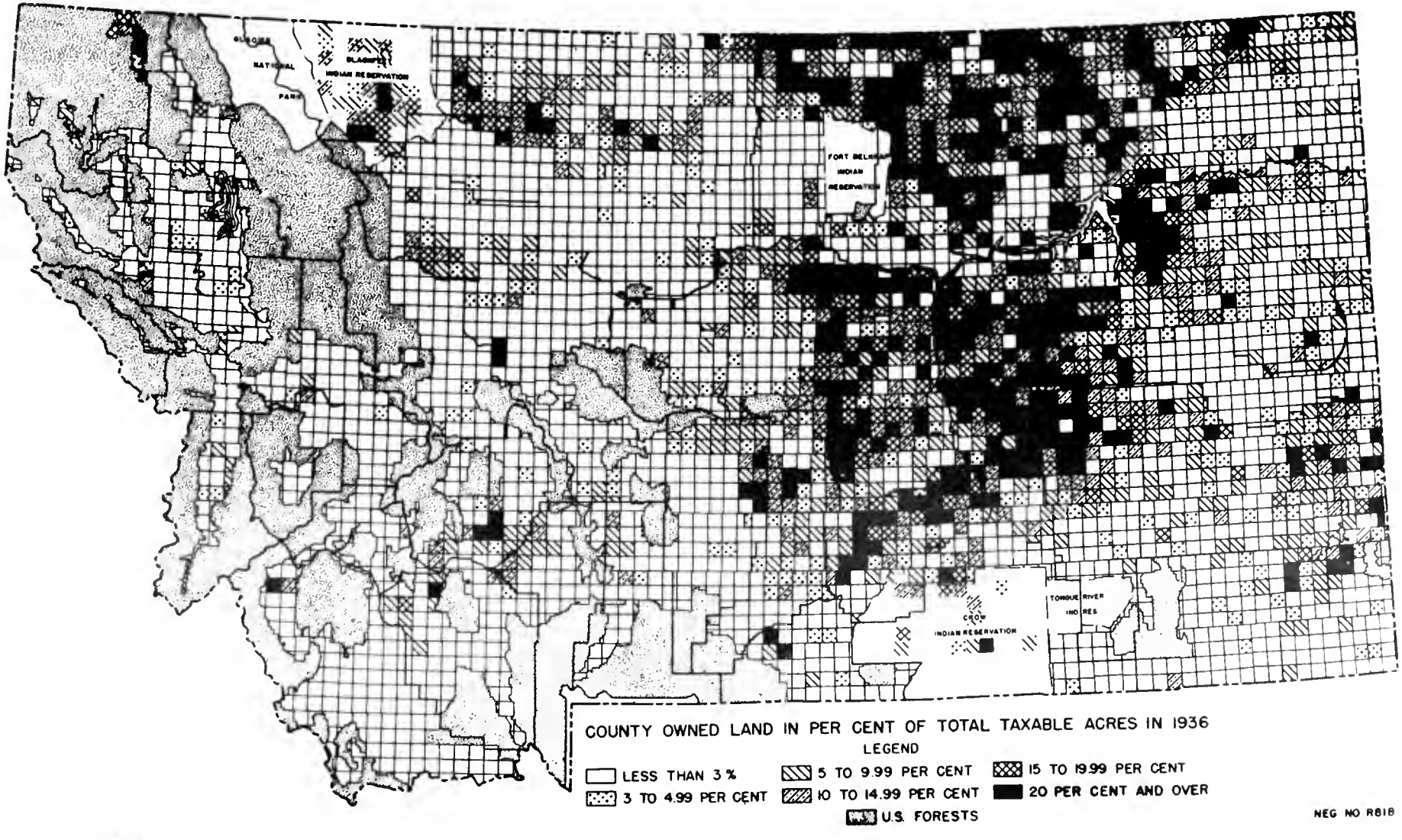
GLACIER
NATIONAL
PARK
BLACKFEET
INDIAN RESERVATION
FORT BELKNAP
INDIAN
RESERVATION
CROW
INDIAN RESERVATION
TONGUE RIVER
IND RES
COUNTY OWNED LAND IN PER CENT OF TOTAL TAXABLE ACRES IN 1936
LEGEND
LESS THAN 3 %
3 TO 4.99 PER CENT
5 TO 9.99 PER CENT
10 TO 14.99 PER CENT
15 TO 19.99 PER CENT
20 PER CENT AND OVER
U.S. FORESTS
NEG NO R818

Figure 11

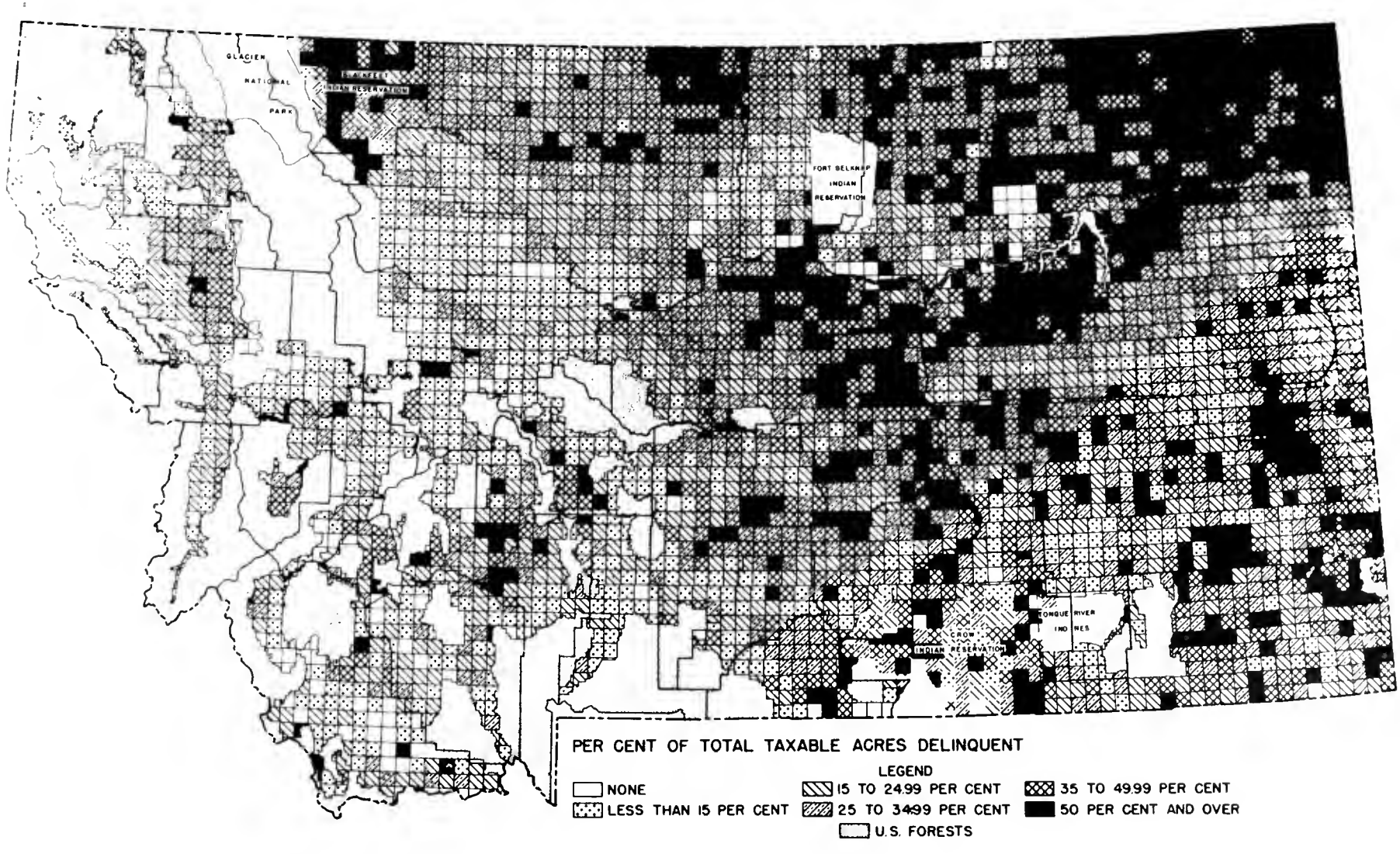
GLACIER
NATIONAL
PARK
FORT BELKNAP
INDIAN
RESERVATION
TONGUE RIVER
INDIAN RESERVATION
PER CENT OF TOTAL TAXABLE ACRES DELINQUENT
LEGEND
NONE
LESS THAN 15 PER CENT
15 TO 24.99 PER CENT
25 TO 34.99 PER CENT
35 TO 49.99 PER CENT
50 PER CENT AND OVER
U.S. FORESTS

Figure 12

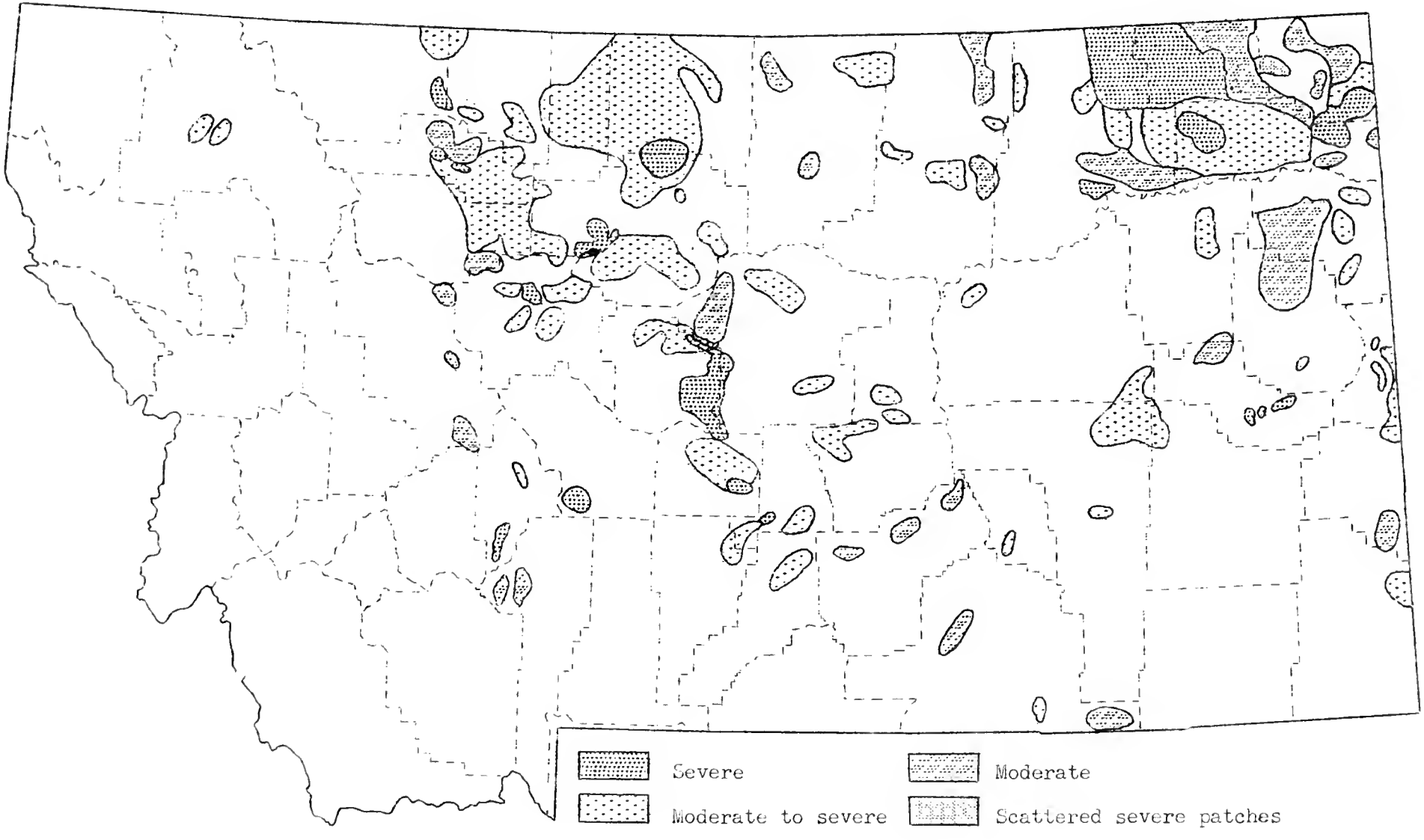

Figure 13.--Wind erosion on Montana farm lands, March, 1938.
(Compiled by the Department of Agricultural Economics, Montana Agricultural Experiment Station and Montana Extension Service with the assistance of W.P.A. Project 1755.)

The migration to towns and cities, while facilitating the handling of relief cases and the dispensing of emergency assistance, has not been accompanied by adjustments which permanently increase the economic opportunities available to these migrants. The activities which have occurred have been largely in the form of keeping these families going through relief grants, and emergency public employment through WPA and PWA.

FOREST AREAS 12/

In the commercial forest districts of the state, the protection, development and wise use of the forest lands, and the harvesting and manufacture of forest products, have a prominent place in current readjustment and permanent rehabilitation of resident and migrant stranded families.

To provide gainful employment so pressingly needed by these families productive projects should be undertaken in the forests.

For those families looking to industry as the major basis of their livelihood permanent employment in the forests can be stabilized far better than it is at present.

For those families contemplating farming as the major basis for livelihood, or needing such supplemental income at least during the period their farms are being developed to self-sustaining degree, stabilized work in the forests can also provide a supplemental income.

For these farm families, if attempts at farming forest lands not suitable for such development--a misuse of forest land--are prevented, distress and ultimate failure can be avoided.

Opportunity for Immediate Employment

To meet present need of gainful employment there is a large amount of productive work which can well be done in the forests right now. Forest lands only partially productive because of past mishaps or mistreatment or inadequate development can be rehabilitated or improved. For example, construction and other improvement can be undertaken to insure optimum beneficial water flows for irrigation and other water use, and to prevent floods. Elimination of fire hazards, like snags and slashing concentrations, and additional construction to facilitate fire control are needed. Large areas need planting. Destructive tree diseases and predatory insect infestations must be combatted. Forage resources on forest lands can be improved with stock water developments, reseeding and rehabilitation of wrongly used forage resources. A large part of the planned road system remains to be completed. Recreation developments, and improvement of fishing, provide an extensive field for work. And this is only a partial list of things which are worthy of accomplishing.

Considerable of this work is already being undertaken. But

12/ Prepared by U. S. Forest Service, Dist. No. 1., Missoula, Mont.

the quantity which available finances make possible is far inadequate to provide the amount of work needed by stranded families. The need of greatly increased means would have to be recognized, to meet the demand for gainful work, if not for the good of the forest lands themselves.

Stabilization of Lumbering and Forestry Employment on a Permanent Basis

The prime requirement for this is stability and regularity of the production and harvesting and manufacture of forest crops, and its maximum realization can come only with a maximum production from the forest lands.

The developed lumbering industry in the State is based on the exploitation and liquidation of timber stands. From the earliest production of timbers for the mines, through the period of fuel and farm-timber extraction for agricultural development, to the present utilization of saw timber for the large sawmills, the cuttings have been without any conception of permanence of the woods industries and security of permanent employment. The only exception in the few decades just past has been the regulated cutting in the national forests, but the national-forest lands average far less productive and accessible than the private lands.

Since the standing timber supply is not inexhaustible, there can be no assurance of permanence without consideration of this aim. Even though contractions in the markets for Montana's lumber have caused wide fluctuations in the annual output--for instance, from the all-time high of 427 million in 1923 to 590 million in 1929 and 112 million in 1932--and doubtless such fluctuations will reoccur though undoubtedly in less extreme in the future, there have been already a number of cases in the State where mills have "cut out and got out" leaving employees and other dependent activities stranded for that reason alone. In neighboring northern Idaho, this process has progressed to far greater degree, many mills have already gone, and the situation threatens to be definitely much more acute in a few years.

The same menace is liable in western Montana unless the cutting of all timber, not only that in the national forests, is coordinated to the objective of permanence and regularity. Obviously, it would be remiss to rehabilitate stranded families on the basis of permanence and regularity of employment opportunity without assurance of that.

There is no present promise that permanent production from privately-owned timber lands can be established. Carrying costs--interest, protection, taxes--let alone risk of loss through fire or disease, force liquidation of commercial timber stands as rapidly as possible, since such costs cumulate rapidly through the years and add so much to the original investment that net returns from lumbering operations become negative. The same handicaps preclude private production of new crops of timber on cut-over lands which would take upward of 100 years.

Ways and means of relieving the burden on private land ownership in regions like western Montana are now being studied by statesmen, economists, lumbermen and foresters, and some solution may yet be found. But the probability of success is not too promising. Along with that,

regulation by the public of the management and cutting of private timber might have to be established to insure that they are geared to furnishing permanence of industry and employment rather than obtaining of greatest direct financial return.

Another solution is for the public to take over private forest lands--cut-over areas surely--and, also, a large part of the present stand of private commercial timber because it is so great a proportion of the total stand. The State or a Federal Government only, can undertake this acquisition burden, and the need of permanent employment alone, gives considerable warrant to such a course, even with possible lack of assured profitable financial return. And proper management and controlled cutting could thus be definitely assured.

While lumbering activities provide by far the greatest source of employment, the continued labor required for the protection of mature and growing stands, and the cultural operations in the latter, and also the maintenance of improvements on, and the general administration of, the forest lands is itself truly material. For this neither the public nor private owners provide adequate means to do a good job, the size of which will increase as management is intensified, and more improvements are constructed. Even discounting the increased advantages to the forest lands and resources and augmented production which thus would be realized, sufficient reason exists for greater financial provisions at least in part in the greater opportunities for regular employment.

Agricultural Development on Forest Lands

The earliest settlers had the selection of the best and most easily cleared lands. Later settlement was forced to forested or cut-over lands more costly to develop, but still productive enough to repay the labor and other outlays for clearing. As more settlers migrated to the State, progressively poorer cut-over and burnt-over forest lands were occupied. Naturally, farming attempts--stimulated by the inherent and admirable urge in man for a "place of his own"--were extended to lands definitely submarginal.

A large proportion of the resident stranded families in the forest districts are in that situation because of their attempts to wrest a living from such submarginal "stump" farms. Their numbers have been seriously augmented by families migrating from the submarginal farms in the drought and other regions to the East--families deluded by the abundance of water and fuel, and the attractiveness of environment.

As a result there has been a cruel waste of effort and blasting of hopes. Also has occurred a distinctly unwise use of forest lands and destruction of or postponement of maturing of tree crops which would have contributed to stabilization of forest industry and permanence of employment. Considerable of the land formerly cleared and in part reverted to no back to forest has been reoccupied by new farm families. Farm clearing, which reached a low ebb in the 1920's, is now again on the increase through the efforts of these people.

Yet there is known but little for st land which based on the past failures of many who have tried, even the most optimistic prospective farmer, if he is adequately informed, would want to clear and develop. Trees grow on soils much less fertile than can cultivated farm crops, and on the remaining forested or cut-over lands the stumps are thicker and larger in proportion to the fertility of the soil. Also, the remaining forests generally occupy the higher elevations, with shorter growing seasons, the steeper ground, and the drier, more porous soils. The general need for irrigation is another detraction.

It is not known to what degree public subsidy is warranted for clearing and irrigation development on forest land, including stump land. This can be determined only through study.

Only through properly directed agricultural development can forest lands, which are submarginal for agriculture, contribute to the welfare of stranded prospective farm families. The first essential is a careful classification and zoning. Other steps are regulation or control of numbers of settlers who may be allowed, and even selection of prospective farmers to insure only qualified aspirants if these steps can be worked out without enroaching unwarrantably on democratic freedom of action. Through existing Governmental and State agencies such as the FSA, the WPA and the Extension Services, they may be assisted in the actual clearing and development and the stocking of these farms.

SECTION V

CORRECTIVE MEASURES

The foregoing data and discussion have indicated the scope of the problem of migratory and stranded families in Montana, the principal causes of this problem, and some of the more important economic and social consequences. This section will point out some public activities which have occurred to date to correct or at least help to improve the situation.

Adjustments by Public Agencies which have Already Been Effected or Are Now in Operation to Correct the Problems of Migratory and Stranded Population

Securing Effective Control and Conservation of Land Resources. One of the most serious problems in Montana which requires solution before a stable and prosperous agriculture and industry can be established, is the land ownership pattern. The conditions under which most of Montana was settled and developed were such as to encourage a shotgun scatter of thousands of small holdings. There are nearly 100,000 ownership parcels of 3 acres or more (primarily agricultural land) in Montana, but there are only approximately half this number of actual farmers in the state. In other words, there is a large number of small absentee owners with scattered parcels which makes it difficult for the operator to secure consistent control over an economical sized unit. The number of ownership parcels is particularly large in some of the eastern dry land counties. For example, the agricultural land in Sheridan County is owned by 2300 different owners or an average of 369 acres per owner, but there are less than 1500 farm operators in the county.

This ownership of the land by thousands of separate property owners, a large proportion of whom constitute absentee owners, complicates the problem of working out an effective land use program. Where the land is suitable for farming in Montana, most of it is of such quality that at least 800 acres are needed under an alternate summer fallow system to insure an economical operating dry land wheat unit. Note that the average size of holdings in Sheridan County is less than half this much. In 1935 the average size ownership tract in Musselshell County was around 350 acres or a little more than a half section each. This is primarily a livestock county. Compare the average size of these tracts with the acreage necessary for an economical range unit which is about 10 times as much (3500 to 4000 acres with average grades of grazing land and lack of supplementary feed supplies through irrigated hay bottoms). The present pattern of ownership is the result of applying the homestead plan of settlement used in the rich humid areas of the nation to the settlement of the semi-arid and extremely varied areas of Montana.

The Federal government, through its land purchase program in three selected areas of the state has attempted to improve the land ownership pattern in these areas by buying up a large number of the small absentee owned tracts to block out grazing areas to lease to the resident ranchers operating in the area. One million eight hundred and

six thousand acres have been purchased or are in process of being purchased by the federal government, 958,000 acres having been purchased in the Milk River Land Utilization project, covering parts of Blaine, Phillips and Valley Counties; 319,000 acres in the Musselshell and Central Montana projects, covering parts of Petroleum, Musselshell, Fergus and Yellowstone counties; and 529,000 acres in the Southeastern and Lower Yellowstone projects, covering parts of Fallon and Prairie counties. (See figure 14). 14/

A total of 1172 families were in these areas before the purchase program began and a total of $4,207,000 had been spent by the federal government by the end of the 1938 fiscal year on the land acquisition program in these areas.

Under legislation passed in Montana in recent years, cooperative grazing districts associations can be formed by ranchers to block out range lands for more effective carrying capacity and utilization. At the present time there are some 32 such associations in the state covering some 12,000,000 acres of range land which are being grazed through the cooperative association idea, (see figure 15). These associations, by blocking out large areas, help to solve one of the most serious problems of effective control of the range caused by the shotgun scatter of thousands of small ownership tracts.

The 1939 Montana Legislature passed a soil conservation districts law which enables 10 or more families of a given community or county to form a soil conservation district and work out effective soil conserving and land utilization practices which are binding upon all land in the district. While no soil conservation districts have been completed at this time, there is much interest in this phase of land use control and there will undoubtedly be some districts formed in the state in the near future.

Farm Security Administration. 15/ Since the inception of the program of the Farm Security Administration, some types of financial aid, either by loans or grants, has been given to some 21,500 Montana farm families, which is the equivalent to 45 percent of the total farm families in the state. At the present time, the Farm Security Administration has some 10,500 active clients.

A survey of 321 typical Montana farm families who received their first loans from the Farm Security Administration in the spring of 1938, shows the following. In 1938 these farmers operated farms and ranches 24 percent larger than in 1937. They increased the acreage planted to livestock feed 69 percent and gardens even more. In 1937 these farmers averaged

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14/ See "Status of Land Utilization Projects, Jan. 31, 1939", published by the statistics unit of the Land Utilization Division of the Soil Conservation Service, U.S.D.A. Feb. 10, 1939, Mimeograph report SU-1.

15/ The data in this section were taken from a mimeographed release dated March 29, 1939, covering Farm Security Administration work with Montana farm clients by C. H. Willson, Regional Director, Farm Security Administration, Denver, Colorado.

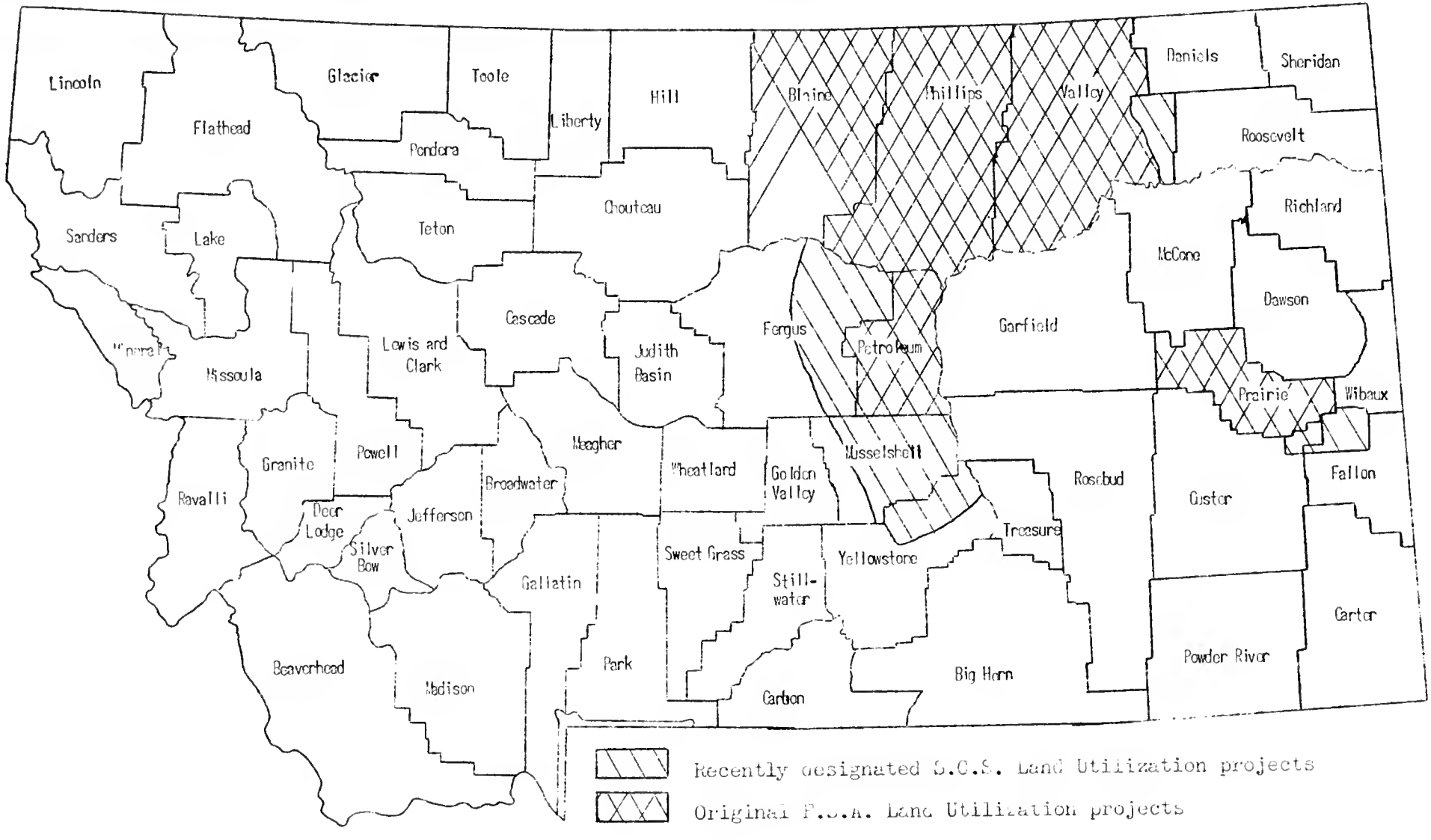
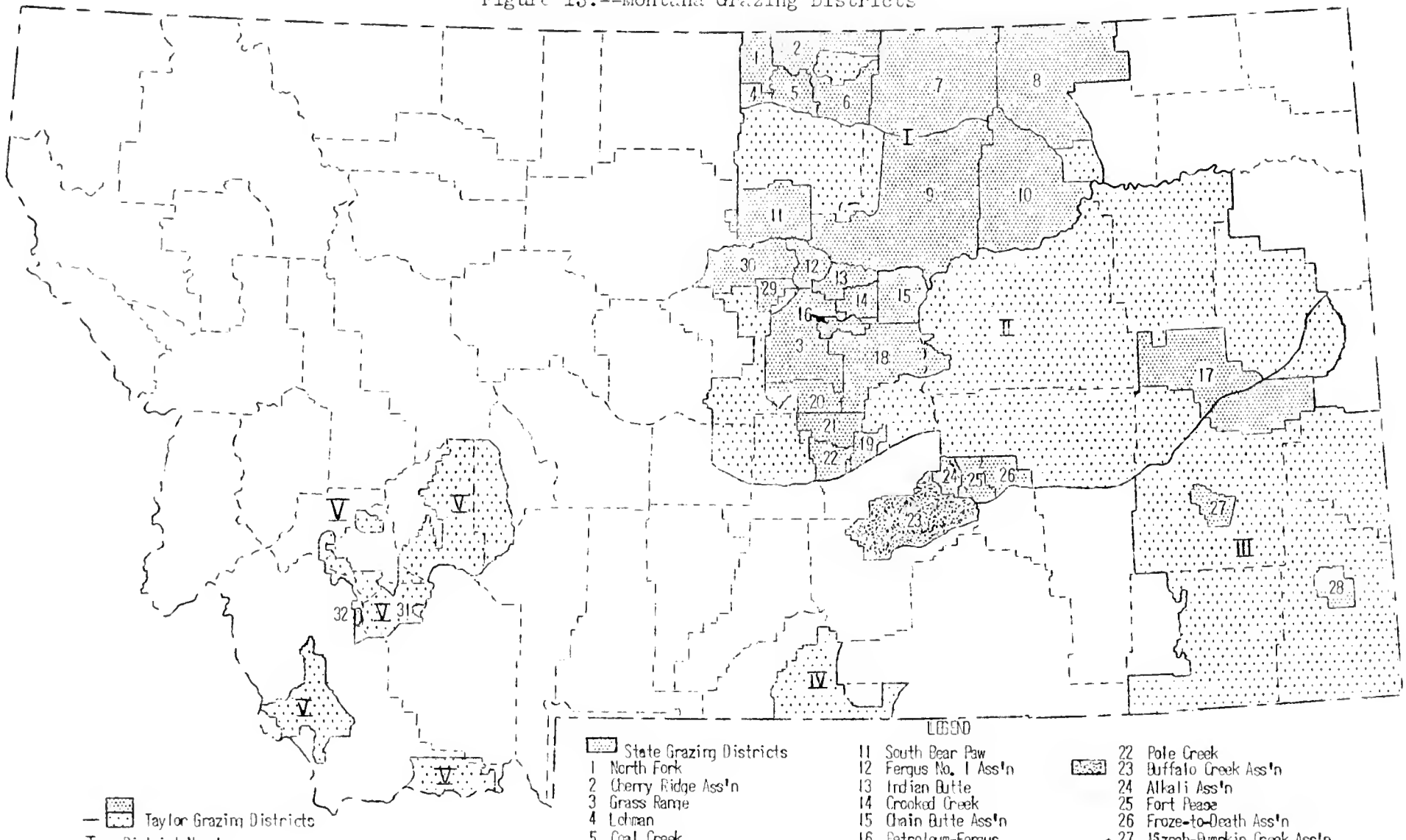


Figure 14.--Designated federal land purchase areas in Montana, July, 1939

Figure 15.--Montana Grazing Districts



LEGEND

State Grazing Districts

1 North Fork
2 Cherry Ridge Ass'n
3 Grass Range
4 Lohman
5 Coal Creek
6 Wayne Ass'n
7 North Phillips County Ass'n
8 North Valley County Ass'n
9 South Phillips County Ass'n
10 Badlands Ass'n
11 South Bear Paw
12 Fergus No. 1 Ass'n
13 Indian Butte
14 Crooked Creek
15 Chain Butte Ass'n
16 Petroleum-Fergus
17 Prairie County
18 Winnett Ass'n
19 Kilby Butte
20 Flat Willow
21 Devil's Basin Ass'n
22 Pole Creek
23 Buffalo Creek Ass'n
24 Alkali Ass'n
25 Fort Pease
26 Froze-to-Death Ass'n
• 27 Mizpah-Pumpkin Creek Ass'n
28 C & P Ass'n
29 Flying V
30 Lower Judith River
31 Waterloo
32 Glendale

• Organized under special act of Congress

Taylor Grazing Districts

I District No. 1
II District No. 2
III District No. 3
IV District No. 4

4.4 cows each; in 1938 each client had an average of 11.2 cows, an increase of 155 percent. In 1937 each client had an average of .6 hogs; last year on each farm there was an average of 1.9 hogs or an increase of 216 percent. In 1937 FSA clients had an average of 34 hens each; in 1938 an average of 59 hens per farm, or an increase of 74 percent. There was an increase of 71 percent in the milk produced for human consumption, 21 percent in eggs, 66 percent in the amount of meat canned and cured for the family table and 78 percent in the fruit and vegetables canned and preserved for home use. In 1937 clients owned an average of 10 animal units each; in 1938 this average increased to 56 animal units. These figures indicate a growing self-sufficiency on the part of these formerly distressed families. The increase in livestock feed supply, in animal units per farm, and the size of gardens is a long step toward economic security for these families.

Debt adjustment committees working with distressed farm debtors have caused the debts of 620 FSA clients and 197 non-clients to be adjusted. The indebtedness of these families prior to adjustments amounted to $2,350,000. Their indebtedness after adjustment was $1,694,560, or a reduction of approximately 30 percent.

Since the beginning of the Farm Security Program a total of nearly 6 million dollars has been loaned in Montana. Individual loans have averaged $935. Despite the fact that farm and crop conditions have been very unfavorable in the last few years, FSA clients in Montana have repaid 21 percent of the amount loaned. This sum does not include interest payments, but rather payments on principal.

Some 394 Montana families have been relocated through public resettlement programs. Of this number, all but 27 have been relocated within the state on 3 resettlement projects: Fairfield Bench farms (129 families), Milk River Farms (158 families), and Kinsey Farms (80 families). Figure 16 shows the location of these three resettlement projects and the counties from which the families relocated on these projects came.

The Soil Conservation Service. The Soil Conservation Service of the U. S. Department of Agriculture began operations in the fall of 1935 with the establishment of the Power-Dutton Project northwest of Great Falls. A year later the Froid Project at Culbertson was established. Both are 32,000 acre projects. Forty-five thousand four hundred and ninety acres are under cooperative agreement with 91 individual farm families.

Strip farming is the rule on both projects. There are 7,856 acres of contour strip cropping; 2,426 acres field strip cropping; and 21,681 acres of wind strip cropping. Ten thousand and eighty rods of fencing were removed or relocated; and 12,932 rods of fence constructed. More than 70 miles of fence row drifting were leveled and the land put back into cultivation. Approximately 7000 acres, or 30 percent of the lands were taken out of cultivation and placed in buffers and pasture, totaling over 7,000 acres; 253,746 shrubs were planted, largely for wind break protection; and 68,763 trees were planted in windbreaks. There were 16 stock-water dams constructed; 954 acres of contour pasture terraced; 594 acres contour pasture furrowed; and 155 acres terraced. On

the Froid Project there are 8 contour diking projects, flood waters of which are utilized to produce alfalfa and hay.

The Soil Conservation Service has under its supervision one CCC Camp at Lewistown, Montana. While at Winnett, Montana this camp constructed two major storage irrigation projects, providing 20,000 and 7,000 acre feet of storage, sufficient to irrigate approximately 7,000 acres of land. The Soil Conservation Service has also placed 6,692 acres of land under cooperative agreement; established 10 flood irrigation systems totaling 410 acres; and reseeded 1700 acres of abandoned crop land to grass. The two major storage irrigation projects at Winnett were constructed under cooperative agreement with the State Water Conservation Board, in which the CCC camp furnished all the labor and the State Water Conservation Board some $50,000 for equipment and materials.

During the 1936 emergency drought program 125 water facilities were built during the three months, including stock water reservoirs, diversion projects and spring developments.

Recently the Land Utilization Projects, formerly under the supervision of the Bureau of Agricultural Economics, have been turned over to the Soil Conservation Service for administration. Sub-marginal land purchases are under way in six designated project areas including the Lower Yellowstone, Southeastern Montana, Milk River, Musselshell-Petroleum, Buffalo Creek and Fergus County. These areas total 11,440,000 acres. To date 1,582,823 acres of sub-marginal land have been purchased. Practically all of the land purchased by the Land Utilization Projects has been made available to State Grass Conservation Districts through local grazing associations.

To date the total of development on Land Utilization Projects consists of grass surveys of 4,762,831 acres; reseeding of abandoned lands on 82,350 acres; contour pasture furrowing on 40,183 acres; contour diking for utilization of flood waters for hay and alfalfa on 1,818 acres; 714 stockwater dams; 71 spring developments; 10 new wells; 128 cattle guards; 13 dipping vats; 805 miles of fence construction; 893 miles of old fence removed; 1,002 old farmsteads obliterated; 3 recreation centers established; 7,500 shrubs and tree plantings completed.

The Soil Conservation Districts Law was passed at the last session of the Montana Legislature, which will permit complete cooperation with the U.S. Department of Agriculture. This law will permit farmers to petition and organize districts on a voluntary basis to accomplish various types of land-use improvements. It is expected four such districts will be organized and ready to function by the end of 1939.

These adjustments in land use are assisting in rehabilitating and stabilizing a large number of farm families in their present location, and are thus minimizing future migration and economic distress.

PWA State Water Conservation Board. The State Water Conservation Board, cooperating with the Public Works Administration has completed and under construction storage for 360,000 acre feet of water and has made contracts to sell the same to 2,139 water purchasers creating an adequate

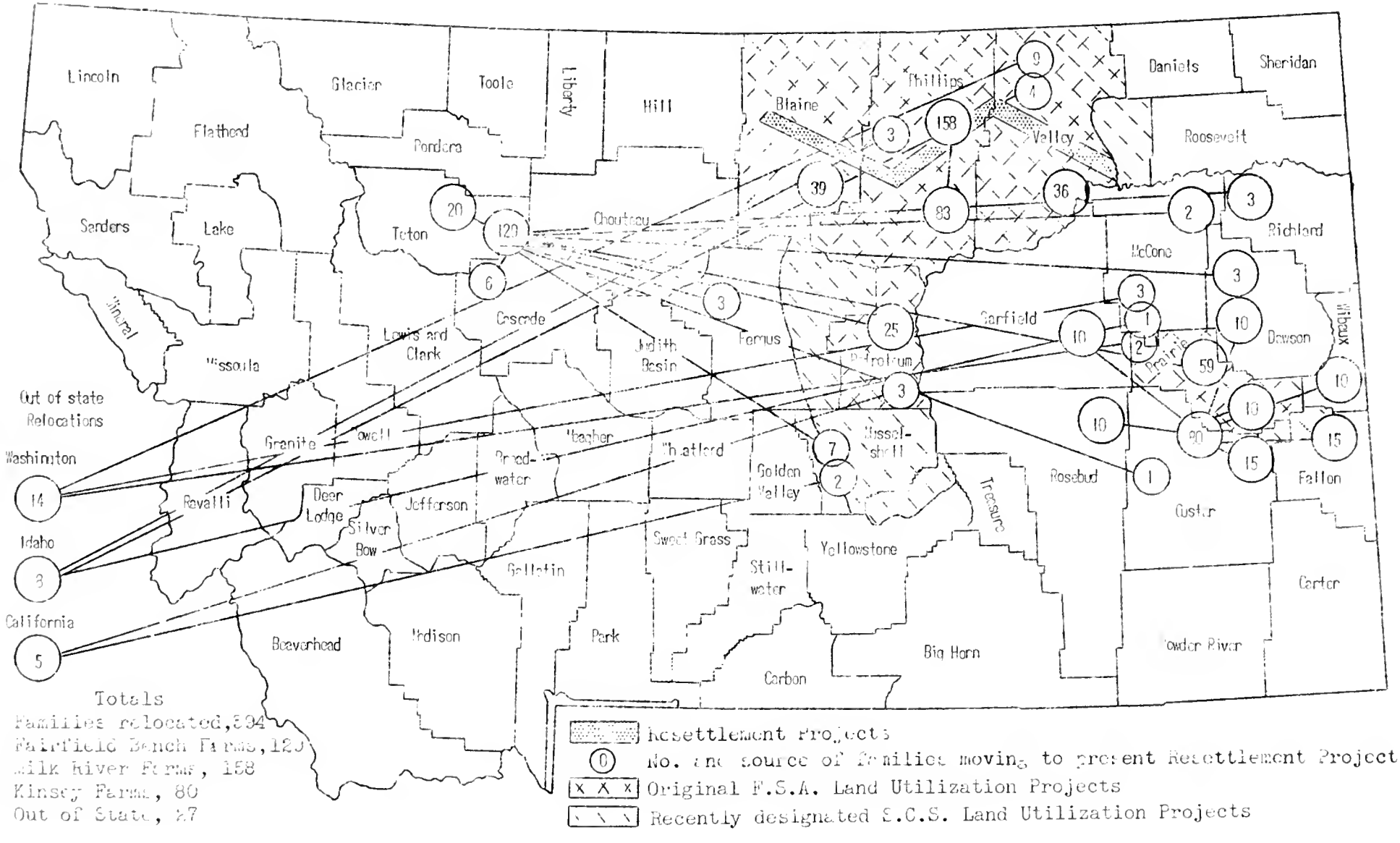


Figure 16.--Location of the Fairfield Bench Farms, Milk River Farms, and Kinsey Farms, Resettlement Projects and the counties from which the families relocated on these projects came.
(From Montana F.S.A.)

supplemental irrigation water supply for approximately 360,000 acres of land, all at a total cost of $7,250,000 of which $2,750,000 is a federal grant. Four million one hundred thousand dollars of federal and $400,000 of state funds are reimbursable over a period of 30 years at four percent. Three thousand four hundred and ten man years of labor are required by this construction program, which is more than two-thirds completed, and the incompleted projects are all under construction.

Because this has been a sound and successful program, it is recommended that a program of Federal-State cooperation be continued along the general lines of the State Water Conservation Board-PWA program.

WPA State Water Conservation Board. The Works Progress Administration, cooperating with the State Water Conservation Board, has constructed 109 storage dams, 50 stock-water dams, 49 flood diversion dams, and 53 miles of canals. These 208 units will afford 107,000 acre feet of storage, with 50,000 irrigated acres below storage and diversion dams, benefiting approximately 500 families.

The State Grazing Commission. The State Grazing Commission, operating under the State Grazing Act of 1933, has been one of the important agencies in the field of conservation and rehabilitation. Since the enactment of the new grazing act of 1939, the program is now carried on by the State Grass Conservation Commission.

Thirty-two state grazing associations and districts are functioning. These associations are authorized by law to lease, purchase, or otherwise provide for the management and use of land, that will best conserve, restore and improve the forage value thereof. The 32 districts have a total of 10,000,000 acres of grazing land and over 2,000,000 acres of commensurate land. The rehabilitation of eastern Montana with its 50 million acres of grazing lands is one of the most important problems of the state. We believe that the progress of the State Grass Conservation Commission is one of the major elements in rehabilitating this area.

Montana Extension Service. The Montana State College Extension Service had made substantial gains in the war against the drought by encouraging and furnishing technical assistance on the following completed programs; 1172 flood irrigation systems; 206 homemade pump installations for irrigation; and 6152 shelterbelt plantings of 2,432,432 trees.

Each of these three programs have shown a gradual increase. The 1172 flood irrigation systems serve 49,243 acres of land and represent a total investment of $172,815 by the farmers benefiting.

The accumulated effect of strip farming for the period 1932 to 1938 inclusive, together with proper cultural practices, has had much to do with prevention of soil blowing on 7053 farms covering over 1,138,000 acres.

These accomplishments should rate high by comparison because they are based on the sound principle of self help and individual enterprise

on the part of the farmer. The systems are low cost, and benefits to the individual become immediately available.

The Montana Agricultural Experiment Station. Sound progress in agriculture is possible only through original and fundamental research which provides new knowledge of the sciences which are involved in the practices used by the producers on their farms and ranches. Since its establishment in 1893; the Montana Agricultural Experiment Station has been concerned primarily with research to determine the best possible uses of its principal agricultural resources, namely, land and water.

The present program of agricultural research presents a many-sided approach to the agricultural problems of the state including, as it does, studies on: (1) Conservation of land and water resources; (2) Increased efficiency of agricultural production; (3) Improving the quality of and market for agricultural products; (4) Improvements in the home; (5) Planning a more satisfactory rural life; and (6) Scientific research as a foundation for agricultural progress.

Studies which have a direct bearing on land use include among others the following: (1) long-time experiments with crop rotations and fertilizers to determine their effects on soil productivity and quality of crops; (2) conservation and use of irrigation water; (3) tillage methods to conserve moisture on the non-irrigated crop and range lands; (4) soil surveys and land classification based on productivity; (5) soil erosion control; (6) crop and soil management practices; (7) farm and ranch organizations and management; (8) types of farming; (9) farm loan experiences; (10) farm and ranch taxation; (11) county indebtedness; (12) rural conditions and trends; (13) economic trends in the range livestock industry; (14) survey of available land and water resources; (15) methods of utilizing grazing lands to prevent deterioration and build up carrying capacity; (16) inventory of water supply from runoff; (17) range improvement by water conservation; (18) regrassing abandoned crop land; (19) grazing value of crested wheatgrass.

If Montana's agriculture is to be permanent and profitable on a long-time basis, it must be adapted to a Great Plains environment in which moisture is the limiting factor in the production of either native forage or agricultural crops on much of the land area in the state. Therefore, the Montana Agricultural Experiment Station is endeavoring to contribute information which will assist in developing land use policies which will permit the establishment of farm and ranch units capable of being adjusted to these seasonal variations in the natural moisture supply. Seasons of subnormal precipitation with subsequent short crops will occur in the future as in the past; thus a permanent agriculture cannot be established unless facts made available through research are recognized in the development of future policies to govern the use of land.

The Montana Agricultural Experiment station enjoys effective cooperation with several state and federal agencies in conducting a coordinated attack on some of the more important land-use problems.

The Agricultural Adjustment Administration. The farm and range conservation program of the AAA must be included here, especially for its conservation and land utilization features.

The agricultural conservation program in Montana in 1937 covered 47,509 farms with 9,110,000 acres of cropland. Practices carried out under the program included the seeding of 224,000 acres of perennial legumes; 5,000 acres of biennial legumes, not including sweet clover; 205,000 acres of sweet clover; and 16,000 acres of mixtures of legumes and grasses. Seventeen thousand acres of crested wheat grass also was seeded. Control of perennial noxious weeds was carried out either by chemical treatment or by periodic cultivation on 5,100 acres, and the practice of strip fallow was established on 275,000 acres. One million two hundred thousand acres of summer fallow was classified as plowless or trash fallow and considered as protected from wind erosion. The estimated payments for the above practices totaled $2,340,000.00.

Under the 1937 range program 2,500 ranches participated, covering 12,600,000 acres of range land. One thousand two hundred and thirty-eight dams for stock-water were built; 55 wells were dug; and 1,891 springs were developed, by digging out and protecting the source of water; 1,493 acres of range land were contoured to secure better spread of run-off water; 89,000 rods of fences were built; and 23,000 acres of depleted range land were reseeded. Rodent control practices were carried out on 1,325,000 acres of range land. Deferred grazing to allow natural reseeding was practiced on 1,090,000 acres. The estimated payment for these practices under the range program was $365,000.00.

Under the 1938 agricultural conservation program 48,000 farms with a total of 9,121,000 acres of cropland participated. Practices carried out included the application of 118,000 pounds of super-phospate; 58,000 pounds of gypsum on legumes and grasses. Five hundred and twelve thousand feet of stranded terraces were constructed. In the construction of dams for stock water 497,000 cubic yards of earth were moved. In the reseeding of non-crop pasture, 85,000 pounds of seed were used. Legumes and grasses of various kinds were seeded on 403,000 acres and 67,000 acres of old stands of legumes were renovated either by surface cultivation or by a combination of cultivation and reseeding. Strip cropping other than for the protection of summer fallow was practiced on 153,000 acres, and 1,560,000 acres of summer fallow was classified as protected from wind erosion either through stripping or plowless methods of cultivation and the incorporation of trash into the surface. The estimated payments for practices under the 1938 agricultural conservation program were $1,340,000.00.

Two thousand seven hundred and thirty-four ranches participated in the 1938 range program which involved a total of 14,000,000 acres. Deferred grazing to allow natural reseeding of range land was carried out on 3,400,000 acres of range land and 28,000 acres of range land was artificially reseeded. Fifty-six spreader dams were constructed and 212,000 feet of spreader terraces were built to conserve flood water. One thousand two hundred and thirty-two dams and reservoirs were built for stock water. Eight wells were dug and 493 springs were developed. The estimated payments for practices under the 1938 range program were $481,000.00.

The range program is founded primarily on conservation practices, while the farm program has the dual purpose of soil conservation and commodity control.

Many people familiar with the AAA program feel that an important accomplishment of the program is the development of interest and information in the conservation problems of the state, both on the farm and ranch; that it has rapidly developed the strip fallow method of summer fallow; that it has greatly increased grass seeding; and that it has materially aided in range stock water development.

Partial Summary. The total accomplishment of the work-relief and agricultural programs mentioned cannot be readily summarized as the various results cannot be expressed in the same terms.

It can be said, however, summarizing briefly a part of these results, that construction of storage for 503,500 acre feet of water is completed or under construction, furnishing a water supply for approximately 475,000 acres of land;

That besides 180 irrigation reservoirs, more than 6,000 stock water reservoirs have been built;

That 1,100 flood irrigation systems and 200 small pump installations for irrigation have been completed;

That more than 760,000 acres have been reseeded to grass;

That more than 45,000 acres have been diked, contoured and terraced;

That by irrigation alone at least 5,000 families have been directly aided; and

That migration of Montana farm families has been materially reduced by the above land use and water conservation programs.

SECTION VI

OUTLINE OF OPPORTUNITIES FOR MIGRATORY AND STRANDED FAMILIES

The preceding sections of this report have dealt with the problem of the migratory farm population in Montana in its various phases. In the following pages an outline is presented of a program of resettlement for these people, enumerating a large number of projects and communities scattered well throughout the state, which offer resettlement opportunities. Estimates have been made for the repayable cost of such a corrective program for more permanent results to enable comparison with the expenditure heretofore made to meet this situation by furnishing relief and temporary employment.

The information on resettlement opportunities in each county was compiled from data furnished by the County Agricultural Agent and/or the County Planning Committee, the Farm Security Administration and the State Water Conservation Board.

The information from the counties was received in response to a questionnaire on the subject by the Extension Service to each County Planning Group. The information from the Farm Security Administration was in the form of a tabulation heretofore prepared by it on "Potential Resettlement Projects in Montana".

The State Water Conservation Board files were consulted and a transcript made of all projects built by the Board under PWA loans and grants, as well as the projects heretofore submitted by the Board to the PWA, but for which funds have not been allocated to date.

The projects given herein do not include all potential projects listed in the State Water Board files, but only those were included where sufficient data are available on costs, acreages, land ownerships, etc. Many of the others are undoubtedly meritorious. Nor does the list include all the areas in the state which have available resettlement opportunities. Many well established projects are not given on account of lack of sufficient information. Land values were estimated from a combination of data obtained from the above named sources and the State Board of Equalization.

In estimating the respective sizes of farm units, consideration was given to three distinct classes of land utilization, namely: (a) crop farming; (b) a combination of farming and stock raising; and (c) small subsistence homesteads. The varying sizes of settlement units are based largely upon general knowledge of various areas, altitude, climate, nature of prevailing crops raised, distances from transportation facilities, markets, nearness to cities or commercial enterprises and opportunities for part time outside employment.

In setting up the grazing areas of the above units, consideration was given to the availability of national forest areas and lands included in grazing districts.

The cost of resettling migratory and stranded families will

vary greatly depending on whether one adopts the low cost policy of simply providing the essentials of land, shelter and equipment, or the high cost program of providing a farm fully equipped at the outset with buildings, livestock and machinery.

Under the low cost policy of providing only the essentials, the settler himself would be expected to add to and improve the property as he succeeds in making the most of his opportunity. Under such a policy the estimated cost for a resettlement program in this state as tabulated hereinafter could be materially reduced.

Estimates of costs appearing on the summary 16/ are derived from the Farm Security Administration on projects proposed by that agency, while estimates of costs of other projects are taken from County Committee reports and estimates set forth below. These costs are in excess of what is required to provide a bare opportunity, and they are considerably below the cost of providing a fully improved farm. It has been assumed in the following estimates that the Farm Security Administration would provide interim subsistence, build the necessary buildings and supply the materials for fences, and furnish tools for leveling and/or clearing land, constructing farm ditches, and so forth.

Cost of	Crop Farming	Combined Farming & Stock Raising	Subsistence Homesteads
Land - variable			
Water- variable			
Buildings	$ 3,000	$ 3,000	$ 3,000
Tools, incidentals, subsistence	2,500	2,500	500
Fencing, materials, per mile	135	135	17/

The information on settlement opportunities is arranged by counties in alphabetical order. The source of information is shown by the letters:

CPB	--	County Planning Board and/or County Agent;
FSA	--	Farm Security Administration; and
SWCB	--	State Water Conservation Board.

Each project is numbered in text and also on the accompanying state map according to the project numbers in the State Water Board files. Other projects are identified by letters, beginning with (A) in each county.

16/ A general summary for the entire state, which is self explanatory, is given after the write-up for Yellowstone County.

17/ Included as a part of incidentals unless the unit is 20 acres or over.

AVERAGE COUNTY LAND VALUES FOR TAXATION PURPOSES FOR TAXABLE YEAR 1938, AS GIVEN BY THE MONTANA STATE BOARD OF EQUALIZATION

County	Irrigated Land	Non-Irrigated Tillable	Grazing Land	State Land
Beaverhead	19.88	10.66	1.99	1.96
Big Horn	36.65	4.90	2.15	2.42
Blaine	21.42	6.19	2.71	3.10
Broadwater	33.61	6.89	2.43	3.06
Carbon	52.24	7.10	2.91	5.12
Carter	-----	5.78	3.74	4.81
Cascade	21.19	12.24	4.07	13.53
Chouteau	19.62	6.67	3.33	4.51
Custer	35.80	4.33	1.87	3.94
Daniels	17.30	11.49	2.82	3.85
Dawson	33.46	8.57	2.53	2.58
Deer Lodge	34.32	5.80	3.38	4.86
Fallon	-----	5.28	1.54	1.04
Fergus	28.40	11.99	2.07	7.42
Flathead	-----	32.93	4.61	3.93
Gallatin	44.42	15.72	2.55	3.71
Garfield	15.00	4.00	1.94	.68
Glacier	20.00	6.90	4.00	2.27
Golden Valley	23.87	4.72	2.25	5.65
Granite	36.82	-----	3.27	-----
Hill	29.07	6.50	3.54	1.42
Jefferson	20.40	-----	1.26	2.40
Judith Basin	24.38	14.72	4.36	8.24
Lake	30.93	13.85	4.07	10.04
Lewis & Clark	28.54	6.88	2.52	1.46
Liberty	15.89	6.59	2.88	1.48
Lincoln	30.73	15.87	2.93	2.40
Madison	23.19	6.84	2.15	2.54
McCone	-----	6.85	1.33	2.66
Meagher	23.32	4.87	2.70	3.17

AVERAGE COUNTY LAND VALUES FOR TAXATION PURPOSES FOR TAXABLE YEAR 1938, AS GIVEN BY THE MONTANA STATE BOARD OF EQUALIZATION

County	Irrigated Land	Non-Irrigated Tillable	Grazing Land	State Land
Mineral	36.33	22.61	3.68	5.41
Missoula	29.71	13.49	2.82	6.17
Musselshell	-----	5.62	2.19	2.55
Park	38.13	8.39	2.50	4.81
Petroleum	13.80	3.02	1.76	3.40
Phillips	13.28	5.54	2.57	1.23
Pondera	30.17	9.18	3.43	4.99
Powder River	-----	5.78	2.24	1.97
Powell	30.31	10.33	3.70	5.64
Prairie	-----	6.75	2.17	1.30
Ravalli	33.32	-----	4.12	1.91
Richland	28.85	6.43	2.35	2.69
Roosevelt	12.27	9.50	3.31	5.82
Rosebud	28.74	5.82	1.99	3.32
Sanders	15.19	12.61	2.89	2.70
Sheridan	-----	9.70	3.04	4.78
Silver Bow	12.78	5.98	2.89	-----
Stillwater	45.25	4.00	2.56	1.76
Sweet Grass	38.69	-----	3.21	3.22
Teton	21.96	11.09	3.45	3.87
Toole	-----	5.79	3.24	1.15
Treasure	32.09	4.49	2.10	4.34
Valley	15.35	7.13	2.73	3.15
Wheatland	23.30	3.95	2.87	3.13
Wibaux	-----	8.75	2.90	1.52
Yellowstone	62.70	4.96	2.00	5.16
State Average	33.26	7.77	2.83	4.03

CRB (April 19, 1939)

"There have been very few migratory families come into Beaverhead County and consequently we do not have this problem. There are no farm families who are not permanently located. There is no possibility of re-establishing migratory or stranded farm families in Beaverhead County unless some water storage developments are made."

FSA

(A) Carter Land Company Tract (location unknown)

Water supply from Beaverhead river; gross acreage 1,275; net irrigable, 1,200; 15 farm units averaging 85 acres; type of project, community; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencingand irrigation.

Estimated cost of land	Total	$ 40,000	Per unit	$ 2,666
Construction and development		108,000		7,200
		$ 148,000		$ 9,866

SWCB

265 Big Sheep Creek Storage Project (PWA Docket No. Mont. 1094)

It is proposed to build a storage reservoir on Big Sheep creek to supply supplemental irrigation to 4,340 acres of land adjacent to the town of Dell. The project is estimated to cost (loan only) $17.28 per acre of irrigated land or an annual amortization cost of $1.35 per acre. There are 9 separate land owners holding title to the irrigable area or an average of 482 acres per owner. Estimating an economical farm unit at 100 acres of irrigated land, the project will support 43 farm families or 34 new families in addition to the present land owners.

297 Clark Lake Storage Project (PWA Docket No. Mont. 1105)

It is proposed to build a dam at the outlet of Clark lake to impound water for the supplemental irrigation of 4,500 acres of land along Grasshopper creek below Polaris post office. The total cost (loan only) is estimated at $13.35 per acre or an annual amortization cost of $1.00 per acre. The entire area is owned by 14 individuals or an average of 375 acres per owner. Estimating an economical farm unit at 100 acres of irrigated land, the project will support 45 families or 31 new families in addition to the present land owners.

10 Medicine Lodge Reservoir Project (PWA Docket No. Mont. 1050)

It is proposed to build a storage reservoir on Medicine Lodge creek to supply supplemental irrigation to 2,400 acres of land in Medicine Lodge creek valley. The project is estimated to cost (loan only) $15.83

per acre or an annual amortization cost of $1.43 per acre. Title to the irrigable area is held by 9 people or an average of 267 acres per owner. Estimating an economical farm unit at 100 acres of irrigated land, the project will support 24 families, or 15 new families in addition to the present land owners.

226 Beaverhead Rock Storage Project (PWA Docket No. Mont. 1049)

It is proposed to build a dam across Beaverhead river about midway between Dillon and Twin Bridges, to store supplemental water. The average annual water supply over a 27 year period is 364,000 acre feet, but the proposed reservoir is to have a capacity of only 81,000 acre feet. It will supplement the irrigation of 68,000 acres of land in Beaverhead and Missouri river valleys and regulate the flow for power on the Missouri river. The project is estimated to cost (loan only) $9.13 per acre or an annual amortization cost of 69 cents per acre. Estimating 100 irrigated acres as an economical farm unit, the project will support 234 new families in addition to the 446 present land owners.

BIG HORN COUNTY

CPB (April 29, 1939)

"Possibilities of relocating stranded farm families on new irrigation development: Victory Project 18/ (on) north Big Horn river, 1,800 acres, 15 families; supplemental water, Willow Creek Project (on) upper Lodge Grass creek, 2,000 acres, 20 families in 1940. Estimated cost of construction $500,000. (indian land) cannot (be) purchased (but can be) leased on regular share basis. Several families can be placed on indian land still available on the Crow Indian Reservation on lease basis."

FSA

(A) Heinrich Estate (location unknown)

Water supply from Big Horn river; gross acreage, 3,040; net irrigable, 2,469; 30 farm units, each averaging 101 acres; type of project, infiltration; type of farming, general; present ownership, priate; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 76,300	Per unit	$ 2,543
Construction and development		186,000		6,200
		$ 262,300		$ 8,743

SWCB

12 Big Horn Canyon Dam

The Big Horn Dam Association has proposed the construction of a dam on the Big Horn river, 45 miles south of Hardin, for the purpose

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18/ Victory Project is located in Yellowstone County. See Yellowstone County for an estimate by FSA.

of power, silt and flood control and to irrigate approximately 61,000 acres of land. The total cost of the project is estimated to be $17,674,000, of which approximately $15,600,000 is properly chargeable to power, silt and flood control, leaving a net cost to irrigation of $2,074,000 or $33.84 per acre of irrigable land.

About 45,000 acres of irrigable land are in the Crow Indian Reservation; the balance, about 16,000 acres, is outside the reservation, near the town of Hardin. Assuming that 4,000 acres of this land will be farmed by the present owners, there would be available for resettlement 12,000 acres. Since this is a sugar beet area, an economical unit would be about 80 acres; thus providing room for 150 new families.

BLAINE COUNTY

CPB (April 21, 1939)

"As to the possibilities of relocating these (migratory and stranded) families, I wish to advise that there are from 15,000 to 20,000 acres of undeveloped land now in the Milk river valley which could be utilized and developed for the relocation of these families. Part of this area, or approximately 5,000 acres, is now under a privately owned irrigation district, which has been abandoned due to improper drainage. According to a survey made by a reclamation engineer, this land can be reclaimed if the proper drainage structure could be developed. This land lies within five miles of Chinook.

"Another location of about 8,000 acres east of Harlem (A) could be developed for irrigation purposes by the use of pumps, securing the water supply from Milk river. There are several small tracts lying west of Lohman (B) which also can be developed for irrigation purposes by pumping out of Milk river, of which the Reclamation Service has already made a detailed survey. According to Mr. H. H. Johnson, Irrigation Engineer for the Reclamation Service, the water supply will be sufficient when the Fresno dam on Milk river has been completed.

"It is estimated that these lands can be purchased for a price not to exceed $7.00 per acre, and it is estimated that with additional development costs of $25 to $30 per acre, the lands would then be in excellent shape for crop production.

"In addition to the above-mentioned lands which could be used for resettlement, there are several large ranches now under irrigation which can be subdivided into economic units which would provide homes for at least twenty-five additional families."

FSA

(C) Milk River Extension in Blaine, Phillips and Valley Counties.

Water supply from Milk river; gross acreage, 123,000; net irrigable, 104,000; 1,300 farm units, averaging 90.46 acres each; type of project, infiltration; type of farming, general; present ownership,

private and corporate; type of development needed, buildings, lands, fencing, irrigation and reservoir.

Estimated cost of land	Total	$ 2,260,000	Per unit	$ 1,738
Construction and development		9,100,000		7,000
		$11,360,000		$ 8,738

SWCB

175 Clear Creek Project (PWA Docket No. Mont. 1098)

It is proposed to construct a storage dam on Clear creek, a tributary of Milk river in the extreme western part of the county to store 3,200 acre feet to supplement the irrigation of 2,500 acres of land in Clear creek valley. The project is estimated to cost (loan only) $36.56 per acre, or an annual amortization cost of $2.75 per acre. The lands are held by 10 separate land owners or an average of 250 acres per owner. Estimating an economical farm unit at 80 acres of irrigated land, the project will support 31 families or opportunities for 21 new families.

BROADWATER COUNTY

CPB (April 1939)

"Possibilities of relocating stranded farm families:

"Broadwater-Missouri Diversion Project is located roughly from Toston north to Johnson community. It contains 21,000 acres with approximately 50% supplemental water; 50% for new lands. In general we believe the project will just about care for those on present uneconomical units, a few stranded families in town, and some of the younger men who may wish to start farming for themselves, through subdivision of present places and addition of new land.

"Estimated price at which land can be obtained: Much of the land has been owned for a long period of time or has been recently acquired so that, in general, land costs should be fairly reasonable.

"It is believed that the project contemplated in the county will just about care for the families within the county who wish to operate farms, and that there will be little, if any, opportunity for families outside of the county. Much of the water which will be made available will be used by present farm and ranch units to stabilize present operations."

FSA

21 Broadwater-Missouri Diversion Project (PWA Docket No. Mont. 1003-F)

The Farm Security Administration lists two projects, both of which are parts of Broadwater-Missouri project. The first is listed as a subsistence type of project with gross area and irrigable area of 1,000 acres to be divided into 200 units, averaging 5 acres each; present ownership, private; type of development needed, buildings, lands and irrigation.

Estimated cost of land	Total	$ 15,000	Per unit	$	75
Construction and development		900,000			4,500
		$ 915,000		$	4,575

The second is an infiltration; type of project for general farming, with gross area and irrigable area of 9,000 acres, to be subdivided into 90 units, averaging 90 acres; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 133,000	Per unit	$	1,330
Construction and development		630,000			7,000
		$ 763,000		$	8,330

SWCB

21 Broadwater-Missouri Diversion Project (PWA Docket No. Mont. 1003-F)

This project is now under construction. A diversion dam across Missouri river and a system of canals will deliver water to 21,000 net acres of irrigable land, a third of which is new land, and the balance supplemental irrigation. In addition to using the normal flow of Missouri river, 10,000 acre feet will be released from Ruby reservoir. The project will cost (loan only) $23.57 per acre of land or an annual amortization cost of $1.32 per acre. In addition to this, 15 cents per acre foot will be assessed as an annual operation charge to cover the cost of Ruby storage. The land area is held by approximately 200 land owners or an average of 105 acres each. An ideal unit will be about 80 acres irrigated and 80 acres of pasture. On this basis, the project will support 263 farm families, or possibilities of locating 63 new families in addition to those already on the land.

CARBON COUNTY

FSA

(A) Red Lodge Homestead (location unknown)

Water supply from Rock creek; gross acreage, 800; net irrigable, 650; 55 farm units, averaging 14 acres; type of project, subsistence; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 13,750	Per unit	$	250
Construction and development		302,500			5,500
		$ 316,250		$	5,750

(B) Bear Creek Homesteads (location unknown)

Water supply from Bear creek; gross acreage, 275; net irrigable,140; 28 farm units averaging 10 acres; type of project, subsistence; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 8,000	Per Unit	$	285
Construction and development		126,000			4,500
		$ 134,000		$	4,785

(C) Red Lodge-Rosebud Project

Water supply from East Rosebud river; gross acreage, 5,000; net irrigable, 3,000; 25 farm units averaging 200 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 75,000	Per unit	$ 3,000
Construction and development		180,000		7,200
		$ 225,000		$ 10,200

(D) Fromberg-Rock Creek Homesteads (location unknown)

Water supply from Rock creek; gross acreage, 230; net irrigable, 230; 46 farm units averaging 5 acres; type of project, subsistence; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 17,250	Per unit	$ 375
Construction and development		184,000		4,000
		$ 201,250		$ 4,375

(E) Bearcreek Homestead (location unknown)

Water supply from Bear creek; gross acreage, 140; net irrigable, 140; 28 farm units averaging 5 acres; type of project, subsistence; present ownership, private; type of improvements needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 8,400	Per unit	$ 300
Construction and development		112,000		4,000
		$120,000		$ 4,300

64 Rock Creek Project (PWA Docket No. Mont. 9378-X)

This project has been completed and is in operation. Two storage reservoirs were built, one at the head of Rock creek to supply supplemental irrigation to the upper Rock creek valley and the other on Red Lodge creek to supplement irrigation on Red Lodge creek and lower Rock creek valley. Construction of the project (70% loan only) cost $16.94 per acre for a total of 31,584 acres, or an annual amortization cost of $1.00 per acre. There are 432 water purchase contracts subscribing to the 31,584 acre feet of water available, which would indicate an average of 73 acres per subscriber.

The original application to Public Works Administration recited that 400 families lived on the land (in 1934) or an average of 78 acres per unit. From this it would appear that opportunities for resettlement would be confined to small areas near towns. It is estimated that at least 8 tracts of 10 acres each, and 16 tracts of 5 acres each, are available for resettlement.

(C) Red Lodge-Rosebud Project

This project, given under FSA above, is a state irrigation district created in August 1920. Bonds are still outstanding. The original cost was estimated at $25.98 per acre. There were 116 land owners in the

district in 1920, or a total population on the land of 382 families.

CARTER COUNTY

SWCB

150 Little Missouri River Project (PWA Docket No. Mont. 1057)

It is contemplated to build a storage reservoir on the Little Missouri river in northeastern Wyoming to supply supplemental water to irrigate 30,000 acres of land lying mostly within Carter County, Montana. A system of canals will be constructed on either side of the river. The project is estimated to cost (loan only) $17.43 per acre of land or an annual amortization cost of $1.15 per acre, each having 120 acres of irrigated land. There are 100 farm owners within the irrigable area or an average of 300 acres of irrigable land each. This project will support 250 farm families, each having 120 acres of irrigated land, which will provide settlement opportunities for 150 new families in addition to those already on the project.

153 Box Elder Creek Project (PWA Docket No. Mont. 1107)

It is proposed to build a dam across Box Elder creek to store flood waters for irrigation of feed crops, and to construct a canal to divert water along the north side of the creek to irrigate approximately 2000 acres of land. The project is estimated to cost (loan only) $26.75 per acre of land or an annual amortization cost of $2.40 per acre. There are 8 land owners living on the project or an average of 250 irrigable acres each. The project will support 17 families, each having an acreage of about 120 irrigable acres, or 9 new families in addition to the present owners.

CASCADE COUNTY

CPB (April 27, 1939)

"Through a checkup with the Farm Security, Public Welfare and with other information available, we have arrived at an estimate of approximately 100 farm families in Cascade County who are migratory or stranded. Perhaps 50 percent of these are in towns and the others are on farms which are insecure or uneconomic units."

242 Benton Lake Project

To divert water from Sun river to the lake bed of Benton lake and to construct a system of canals to irrigate 20,000 acres of land lying northeasterly from Great Falls. The estimated cost of the project is $2,500,000, and it is estimated that there will be 165 economic units.

Great Falls-Vaughn Division Project

To divert water from Sun river to a proposed reservoir and to

construct a system of canals along Muddy creek and Sun river valleys. The estimated cost of the project is $530,000 and it is proposed to divide an estimated 7,500 acres of irrigable land into 62 economic units.

(B) Fort Shaw Irrigation District

"Land available under the Fort Shaw Irrigation District as reported by the secretary: 'There are probably 5,000 acres of grazing land adjoining Fort Shaw Division which can be bought from $2.00 to $4.00 per acre. My estimate would be that at least 1,500 acres of irrigable land could be bought at $40.00 per acre plus extra for improvements.' The Planning Committee understands that this land is composed of improved farm units where a farmer could move in and take possession immediately and start farming operations. With reference to the grazing land it would be necessary to purchase this and divide it into units to become a part of the irrigated farm units or formed into grazing districts to be operated in conjunction with the farming units."

267 Chestnut Valley Land Company

"A letter received from the president of the Chestnut Valley Land Company gives the following information: 'The Chestnut Valley Land Company, a corporation, is owner of 4,400 acres of land in Chestnut Valley Irrigation District, located near Cascade. The total acreage in the district is 4,660 acres of land. All of the land of the company has been irrigated or is subject to irrigation from a canal approximately twelve miles in length, diverting water from Missouri river. The district has a bond indebtedness of $140,000 which was created by borrowing money for the construction of the irrigation system. All the bonds have been cancelled and there is no indebtedness against the district or the lands of the company. The only charge for water would be a small maintenance charge.

"The land company would accept $75,000 for the 4,400 acres of lands, with water rights appurtenant, which places a value on the land of approximately $17 per acre. It is the desire of the company, if possible, to sell the land in one body. If the land should be sold in separate parcels, it would, of course, be necessary to have a value placed on each parcel as there is considerable variation in the soil, and other conditions affecting value. The parcels should be so valued that the total valuation would amount to approximately $75,000.

"The committee feels that both the Teton Land Company and the Chestnut Valley Project offer exceptional opportunities and we will be very glad to work with your board in furthering their development."

The Teton Land Company

"This property consists of between 7000 to 8000 of farm land, most of which can be irrigated, also between 29,000 and 30,000 acres of grazing land which is either adjacent to or near by the farm land.

"The Teton Land Company holdings are owned by a number of stockholders and it is our opinion that all of these stockholders would be

willing to sell at a reasonable price. The Planning Committee believes that the Teton Land Company holdings offer the best opportunities of any of the projects being investigated. The reason for this opinion is the large number of acres of high grade farm land for which water is available, and the fact that the irrigation project is practically all built and can at a low cost deliver water to all of the units on the project. We also were impressed with the large percentage of good quality grazing land which would be available to go with the farm units and it is our opinion that this project should be given serious consideration when you are thinking about locating people on family size farms. 19/

FSA

267 Chestnut Valley Irrigation District (Point of diversion, Sec. 36, T. 17 N., R. 2 W.)

Water supply from Missouri river; gross acreage, 4,400; net irrigable, 4,400; 55 farm units averaging 80 acres; type of project, infiltration; type of farming, general; present ownership, corporation; type of development needed, buildings, lands fencing and irrigation.

Estimated cost of land	Total	$ 75,000	Per unit	$ 1,363
Construction and development		440,000		8,000
		$515,000		$ 9,363

(C) Byrn-O'Neal Lumber Company (location unknown)

Water supply from Sun river; gross acreage, 7,440; net irrigable, 6,000; 100 farm units averaging 74 acres; type of project, infiltration;; type of farming, general; present ownership, corporation; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 74,400	Per unit	$ 744
Construction and development		720,000		7,200
		$ 794,400		$7,944

SWCB

607 Dearborn-Crown Butte Project (PWA Docket No. Mont. 1251)

It is proposed to store water on Dearborn river and also to divert water from Sun river to irrigate 20,000 acres of land along Big Muddy creek valley and along the west side of the Missouri river valley between Cascade and Great Falls. The cost per acre (loan only) was estimated at $36.83 or an annual amortization cost of $2.93 per acre. Practically all the land will be new irrigation. Several plans of development are possible. Detailed surveys are still in progress but final resulting costs have not been completed. Revised plans and corresponding costs may ultimately change the above estimates. It is estimated that there are 30 families living on the area at the present time, and that development of the project will give opportunities to at least 167 new families, each having 120 acres of irrigated land.

19/ This project is located largely in Teton County and listed under said county by FSA as "Floweree Project."

CHOUTEAU COUNTY

CPB (April 28, 1939)

"In regard to the irrigation development, much of the good irrigation possibilities is in private hands and it is questionable whether this would be made available for relocating stranded or migratory families. In regard to Marias Irrigation Project, this, of course, if developed, would provide more than enough acreage for the use of above families. Since no information is available on this project at present, it will be impossible to estimate cost of construction or prices at which land could be obtained.

"Migratory and stranded families in this county would be reestablished by (1) increase of the size of the unit; (2) providing loans for livestock so that part of the living costs could be produced on the farm, as well as loans for livestock to put more farmers back into livestock who were forced outdue to drought and insects during past three years."

SWCB

One proposed project, Big Sandy, will likely be developed as a part of Marias River Project by the United States Bureau of Reclamation. (see Toole County)

CUSTER COUNTY

CPB (April 28, 1939)

"There is no new irrigation development going on which would provide suitable opportunity for rehabilitating migratory and stranded families and there is no apparent other possibility for migratory families establishing in these parts."

FSA

(A) S.H. Ranch (location unknown)

Water supply from Tongue river; gross acreage, 37,280; net irrigable, 1,440; 20 farm units averaging 1,863 acres; type of project, community; type of farming, general stock; present ownership, private; type of development needed, buildings, lands, irrigation and fencing.

Estimated cost of land	Total	$ 97,280	Per unit	$ 4,864
Construction and development		132,000		6,600
		$ 229,280		$ 11,464

326 Penell Creek Project

Water supply from Pennell creek; gross acreage, 500; net irrigable, 500; 5 farm units averaging 100 acres; type of project, community; type of farming, general stock; present ownership, private; type of development needed, building repairs, lands, fencing and irrigation.

Estimated cost of land	Total	$ 5,060	Per unit	$ 1,012
Construction and development		25,000		5,000
		$ 30,060		$ 6,012

(B) Miles City Ranch Company (location unknown)

Water supply from Tongue river; gross acreage, 1,170; net irrigable, 350; 5 farm units averaging 234 acres; type of project, infiltration; type of farming, general stock; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 15,000	Per unit	$ 3,000
Construction and development		35,000		7,000
		$ 50,000		$10,000

(C) Wertheimer Land (location unknown)

Water supply from Tongue river; gross acreage, 478; net irrigable, 300; 5 farm units averaging 95.6 acres; type of project, infiltration; type of farming, general stock; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 30,000	Per unit	$ 6,000
Construction and development		35,000		7,000
		$ 65,000		$13,000

293 Sadie's Flat Project

Water supply from Yellowstone river; gross acreage, 6,200; net irrigable, 6,200; 75 farm units averaging 82.66 acres; type of project, community; type of farming, general; present ownership, corporation; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 62,000	Per unit	$ 826
Construction and development		630,000		8,400
		$692,000		$ 9,226

SWCB

Tongue River Storage Project (PWA Docket No. Mont. 1054-D)

Construction work was completed in the spring of 1939. The project consists of a storage dam on Tongue river near the Montana-Wyoming line, to conserve flood water for supplementary irrigation of 35,000 acres of land along Tongue river valley between the dam and the river's mouth, and also an area adjacent to Miles City in Yellowstone valley. These lands are located in the counties of Big Horn, Rosebud and Custer. The cost of construction (loan only) amounts to $18.86 per acre, or an annual amortization cost of $1.30 per acre. There are 120 individuals actually farming the irrigable area or an average of 194 acres each. Farm units consisting of 80 acres each of irrigated land will provide 437 units or room for 317 new families in addition to those already there.

293 Sadie's Flat Project (PWA Docket No. Mont. 1206)

It is proposed to pump from Yellowstone river to irrigate 6,200 acres of new land midway between Miles City and Forsyth. The loan cost of building the project is estimated at $17.58 per acre or $1.32

per year, amortized over a 50 year period. Annual operation and maintenance cost of pumping is estimated at 1.75 per acre. Duty of water is computed at 3 acre feet per acre. Settlement opportunities are listed above under FSA.

53. Lower Pumpkin Creek Project (FWA Docket No. Mont. 1115)

It is proposed to build a storage reservoir on Pumpkin creek to supply supplemental irrigation to 9,500 acres of land along Pumpkin creek valley. Distributing canals are built. The cost (loan only) is estimated at $23.54 per acre. Since this is a stock raising area, it is estimated that a farm unit should contain at least 120 acres of irrigated land or a total of 79 farm units in the project. On this basis it is estimated that there will be opportunities for 50 new farm families in addition to those already there.

DANIELS COUNTY

CPB (May 1, 1939)

"The material contained in this report is the result of a study, made by the Daniels County Planning Committee and the County extension Office, of county economic conditions, available agricultural resources and population. It is not the intention of the committee that this report be final but rather that the information contained herein be considered preliminary and the basis for further study. A complete and more detailed report covering the same problems will be submitted later.

"In arriving at the estimates, the committee has taken into consideration the agricultural resources of each community along with the number of families now living in those communities, the percentage of tenant farmers in each community, the percentage of farmers farming economically unsound units and the number of farmers not adapted to the type of agriculture which exists here.

"It is estimated that there are three hundred and five (305) farm families existing within the county boundaries, which can be considered as not permanently located. (The above figures represent the number needing relocation in order to affect proper land use adjustments within the county) This figure includes both migratory and stranded types of families.

"It is felt by the committee that no material possibilities exist for relocating these migratory and stranded families within the county. Possibilities for developing irrigation projects are so minor that the estimate listed above would not be affected. In the few cases where irrigation possibilities do exist, their development would only tend to make the farmers already living in these areas more secure and stable, but would not make room for additional families. The committee feels that, with minor exceptions, the greatest use is already being made of the counties' available resources, and that such resources are not sufficient to adequately care for the needs of the present existing farm population."

SWCB

30 Richland Flood Control Project (PWA Docket No. Mont. 1056)

It is proposed to construct a storage reservoir on West Fork of Poplar river and build two canals to distribute water to 7,971 acres of land along the valley immediately below Richland. The Public Works Administration application was not allotted, but Works Progress Administration constructed some of the ditches. The project is estimated to cost $24.73 per acre (loan only) or an annual amortization cost of $1.90 per acre. There are 34 land owners on the project, with an average of 235 irrigated acres each. On the basis of 100 acres of irrigated land per owner, a total of 79 farm units will be available for settlement or room for 45 new families in addition to the 34 now owning the land.

27 East Fork of Poplar River Project (PWA Docket No. Mont. 1063)

It is proposed to build a storage reservoir on the East Fork of Poplar river and excavate canals to irrigate 5,300 acres along the river above Scobey. Part of the canals were built by Works Progress Administration. The project is estimated to cost (loan only) $21.13 per acre, or an annual amortization cost of about $1.60 per acre. There are 60 land owners on the project, with an average of 86 acres of irrigated land per owner. It would seem from present information that settlement opportunities on this project are remote.

DAWSON COUNTY

CPB (April 28, 1939)

"Possibilities of relocating stranded farm families: Buffalo Rapids, Dawson County; number of acres, 17,000; number of economic family units, 100.

"Approximately one-half of the 200 estimated surplus families may be located on the new Buffalo Rapids Irrigation District; with these off the balance of the county, possibly 50 remaining could be rehabilitated in the area; the balance are surplus."

SWCB

In the above discourse, regarding Buffalo Rapids Project, the data given cover the entire project which extends through Dawson and Prairie counties.

See Prairie County for details of cost per acre and for probable cost of resettlement.

DEER LODGE COUNTY

SWCB

There are no Public Works Administration projects in the county

sponsored by the board. According to the State Board of Equalization, 25,602 acres in the county are classed as irrigated land. No data are available as to the opportunities for resettlement of migratory and stranded families in Deer Lodge County.

FALLON COUNTY

CPB (April 29, 1939)

"At the Fallon County Planning meeting held March 25th, statement was made by the planning committee and by ex-officio members representing government agencies, and the following report is made:

"Possibilities of relocating stranded farm families: Under this item there was some discussion. However, in general, there are no recommendations to be made under this section.

"There are plenty of farm families in Fallon County at the present time.

"It is the opinion that Fallon County can take care of what stranded families there are in the county."

SWCB

538 Little Beaver Creek Project

An engineering report was prepared for submission to Public Works Administration but was not filed. It is proposed to build a storage reservoir on Little Beaver creek, near the Fallon-Carter County line, and construct canals to irrigate 6,000 acres of land along the Beaver creek valley. The cost was estimated (loan only) at $32.14 per acre. No data are available on the number of land holders or the population, but it is estimated that 10 farmers own all the irrigable area. At 80 acres of irrigated land per unit, the project will support 75 families or 65 new families in addition to the present 10 owners.

FERGUS COUNTY

CPB (May 5, 1939)

"With reference to possible resettlement project, it appears there is only one in the county which would relocate a number of people. This is known as the Bank and Huffins ranches, consisting of about twelve sections on Warm Spring creek in the west central part of Fergus county.

"The Farm Security Administration has made a detailed study of this area for a resettlement project.

"At present it is doubtful if it can be worked out on more than half of the land. The number of farmers who could be relocated on this project is not certain since the economical side of the unit has not been determined.

"There are several Works Progress Administration and Soil Conservation Service possibilities, but these would tend only to stabilize

the present operators.

"We have included in our planning outline the survey of water resources and possibilities for development but the planning engineer has not had time to work on this as yet."

FSA

(A) Judith Basin

Water supply from farm springs, creek; gross area, [illegible] acres; net irrigable, 4,254 acres; 35 farm units averaging 121 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, levees, fencing and irrigation.

Estimated cost of land	Total	$ 85,00	Per unit	$ 2,4
Construction and development		252,1		7,2
		$ 337,35		$ 9,6

SCS

468 Lewistown Ditch Company Canal

This canal was constructed last year by works progress administration with the bear [illegible] as sponsor. It [illegible] the natural flow of Spring creek to irrigate 1,[illegible] acres northwest of Lewistown. Development cost amounts to about $10.00 per acre. The canal could be extended to include 80 acres more on [illegible] at about the same cost per acre. No records are available as to the number of land owners or population on the project.

587 Moss Fork Irrigation Project [illegible] Feder[illegible] [illegible]. 1[illegible]

It is proposed to build a storage reservoir on [illegible] Fork of Judith river and canals to irrigate [illegible] acres [illegible] west of Lewistown. The loan cost is estimated [illegible]. There are 46 water users on the project giving an average of 174 acres per user. If farm units consist of 120 acres of irrigated land, the project will support 68 families or 11 new farm families.

588 Cottonwood Creek Project

It is proposed to build a storage reservoir on [illegible] creek for supplemental irrigation of [illegible] acres of land [illegible] west of Lewistown. Construction is estimated to cost (loan only) $[illegible], or an annual amortization cost of $[illegible] per acre. There are 46 potential water users on the project or an average of 1[illegible] acres per user. Actual number of farmers on the [illegible], or population is not known at this time. It is estimated that at least 7 new units of 10 acres each of irrigated land are available for new families.

[illegible]

CPB (April 29, 1939)

"Possibilities of [illegible] [illegible] [illegible]

217 Talley Lake, 45 Hungry Horse. Neither of these projects will bring into production very much new land, but as a result of any irrigation development many of the larger units would be subdivided, thereby making possible a certain amount of relocation of farm families. Under the Talley lake project as much as 1,000 acres might be put under irrigation. 275 or more farms might be irrigated, and of this number perhaps about 40 would be new farming units. The possibility of general irrigation development in Flathead County, as a result of the building of the Hungry Horse Dam, might eventually mean 50 or 60,000 acres of crop land put under irrigation. There are no doubt a large number of opportunities which would present themselves for relocation of stranded farm families if this project is completed.

"Provide supplemental water to existing areas: (A) Ashley lake project. Providing for an additional water supply by the Ashley Lake Irrigation Project might mean another 1,000 acres of farm land put under irrigation and the possibilities of relocating up to 20 farm families.

"A number of smaller projects, all of which are privately owned, could be further developed by providing for supplemental water. Twenty-five or more farms would be assisted by this type of development.

"The cost of construction will vary greatly, depending upon the type of development which is taking place. Some of the smaller privately owned projects can be developed for as little as $10.00 per acre. Various estimates are available on the cost of construction of Talley Lake Project and this cost has been placed from $30.00 an acre and up. Any general irrigation development of the valley would probably cost from $25 to $50 an acre, with adequate water supply provided for irrigation during the entire season.

"The estimated price at which land can be obtained: Land values are relatively high and would be from $25 to $100 per acre, depending on the location and the amount of improvements on the place.

"(B) The best possibilities for relocating and assisting a large number of these families would be through the development of cut-over lands. There are at least 15,000 acres of cut-over lands in Flathead County of productive soils. This land is valued at $5.00 an acre and up, to valuations which are entirely out of line with the actual worth, with an average of about $10.00 an acre for most of the better undeveloped cut-over lands. As many as 200 families could be assisted through a program of development of these cut-over lands, many of whom could be rehabilitated on economical farm units and some of whom would be on more of the subsistence type of farmstead. The cost of developing these cut-over lands would vary greatly, ranging from $10.00 to $50.00 an acre with an average of about $25.00 which would seem to be in line with the present expenditures for such development. At the present time, most of these lands are owned or are being purchased by the family living on the land. Although these people are making some improvements, this development is very slow due to lack of finances.

"The rehabilitation of many of these people within Flathead

County is possible.

"(C) A tenant purchase program might be of very material assistance in helping perhaps 50 percent of those who are now stranded in vacant farm homes. These farms are nearly all for sale, but the families living on the farm in most cases haveno capital whatsoever to buy with, nor do they have in most cases the necessary equipment to operate a farm. Many of these people have a good farm background and no doubt could successfully operate the farm on which they are now living.

"Another type of development would be the development of cut-over lands. It is felt by the planning committee and generally by the people of the county that this should be more in the form of assisting the farm family in carrying out their clearing operations a little more rapidly than they are doing at the present time, rather than through some general development under a large project. The situation at the present time is that most of these people have to work away from the farm in order to earn their living, and the wages they receive are so small that it leaves very little to put into the development of their land. In most cases they would have no time to put into such development.

"There is some possibility of helping a large number of these people to relocate by some irrigation development. This type of development could be in line with the larger, more commercialized type of farms, or it could be in the form of small tracts on very highly productive soils. This latter type of development would be more in line with the subsistence type of development.

"The last factor which must not be overlooked is the fact that Flathead County has always had a large number of farmers dependent for part of their living on part time work. This type of community pattern seems most acceptable to our conditions and every effort should be made to determine the amount of public work which could well be carried on in this area. The Forestry Service, both state and federal, has a large number of worthwhile projects which would be carried out to the benefit of the state and nation. The Park Service is another such agency. These agencies supplement the income from the subsistence type of farm. The County Agricultural Planning Committee recommends a complete survey be made of the employment possibilities in connection with these agencies, and this study should not be from the standpoint of an emergency, but from the standpoint of permanent public works. The county and city could carry a limited public works program, but not to extent of supporting the stranded population which now exists in Flathead County."

SWCB

217 Talley Lake Project (FWA Docket No. Mont. 1-85)

It is proposed to make a reservoir of Talley Lake to supplement the irrigation of 1[illegible],000 acres of land northwest of Kalispell. The loan cost is estimated at $38 per acre. The irrigable area is owned by 99 individuals or an average of 111 acres per owner. On the basis of 8[illegible] acres of irrigated land per unit, the project will support 125 families or 35 new families in addition to the 90 already on the land.

GALLATIN COUNTY

FSA

(A) Manhattan Company Project (location unknown)

Water supply from Gallatin river; gross acreage, 3600; net irrigable, 3600; 30 farm units averaging 120 acres; type of project, community; type of farming, general; present ownership, corporation; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 100,000	Per unit	$ 3,333
Construction and development		210,000		7,000
		$ 310,000		10,333

GWCB

47 Willow Creek Project (FWA Docket No. Mont. 1002-R)

This project is completed and operating. It consists of a storage reservoir on Willow creek to supply supplemental irrigation to 12,000 acres of land in Willow creek valley. The total estimated cost (loan only) is $10.78 per acre or a yearly amortized cost of 75 cents per acre. There are 144 water purchase contracts for the stored water, making an average of about 83 acres per contract. There are probably very few, if any, opportunities for new settlers on this project.

410 South Bench Project (FWA Docket No. Mont. 1186)

It is proposed to divert water from storage on the Willow Creek Project, to irrigate 7500 acres of land on the bench southwest of Three Forks. Water taken from the reservoir will be replaced on the lower Willow creek lands by pumping from the Jefferson river. The loan cost is estimated at $37.34 per acre with an annual pumping charge of $3.50 per acre. The land is owned by 45 title holders or an average of 166 acres per holder. If divided into farm units of 80 acres each, the area will support approximately 94 farm families, or 49 new families in addition to those already owning land.

422 Middle Creek Storage Project (FWA Docket No. Mont. 1167-R)

This project is now under construction. A storage reservoir on Middle creek will store 8500 acre feet of water for the supplemental irrigation of 15,000 acres of land located along Cottonwood and Middle creek valleys. The loan cost is estimated at $25.55 per acre foot of storage. The area is a well established farming community and the opportunities for new settlers is probably remote.

GARFIELD AND PETROLEUM COUNTIES

CPB (April 26, 1939)

The report states that the irrigation development possibilities are "mostly individual flood, storage and pump project." No list of irrigation developments is given, but it states: "Irrigation

development is useful largely for stabilization, not relocation". The report answers the question as to the believed extent to which migratory or stranded families can be reestablished in the county, with the following statement:

"A few stranded families, or rather families residing on improper sized units, may be adjusted by increasing the size of these units from existing and uncontrolled land. Few, if any, of the present number of farm and ranch families will need to relocate elsewhere outside the county. If relocation or readjustment of existing farm families was accomplished, and practically no additional families or graziers were to come into the county from outside, it is believed that desirable adjustment could be made. Stabilization of existing families is also of much importance."

SWCB

270 Big Dry Project (Garfield County) (PWA Docket No. Mont. 1106-D)

This project consists of a storage reservoir on Big Dry creek and a diversion canal to irrigate 2000 acres in the vicinity of Jordan. The project was completed in 1939, but high water in the spring washed out a part of the dam, and repairs have not been made. The total cost of the project (loan only) is estimated at $25 per acre or an annual amortization cost of $2.00 per acre. Title to the irrigable area is held by 45 land owners or an average of 44 acres per owner. The project would probably not support any additional farm families.

278 Wason Flats Project (Garfield County)

This project was built by State Water Conservation Board with cooperation of Works Progress Administration, and consists of a diversion canal from Little Dry creek to irrigate 2000 acres of land. Cost of the project (sponsor's cost) is estimated at $4.00 per acre. The number of families on the project at the present time is unknown, but it is estimated that at least 5 new families could be located in the area, each having an irrigated tract of 100 acres.

45 Valentine Project (Petroleum County)

This project was built by State Water Conservation Board with the cooperation of the Federal Emergency Relief Administration, and consists of a storage reservoir to irrigate 1000 acres of land. A pump will have to be installed to lift water to the irrigable area. The total cost of the project (sponsor's cost) is estimated at $15.63 per acre. The project will probably support 3 new families in addition to those already on the land, each tract to contain 120 acres.

98 Winnett Irrigation Project (Petroleum County)

This project consists of a storage reservoir to irrigate 4000 acres of land. The project was completed last year. The total cost of the project (sponsor's cost) is estimated at $7.75 per acre of irrigated land. Title to the irrigable area is held by 36 land owners or an average

of 111 acres per owner. Population living on the project is 50 persons. Estimating an average farm unit to consist of 100 acres irrigated, the project will support 40 farm families or 4 new families in addition to the present land owners.

166 Yellow Water Project (Petroleum County)

This project consists of a storage reservoir and a dam to irrigate 2500 acres of land. The total cost of the project (sponsor's cost) is estimated at $10.95 per acre of irrigated land. Title to the irrigable area is held by 10 land owners or an average of 250 acres per owner. Estimating an average farm unit to consist of 120 acres irrigated, the project will support 21 farm families or 11 new families in addition to the present land owners.

97 Flatwillow Storage Project (Petroleum County) (PWA Docket No. Mont. 1221)

It is proposed to build a storage reservoir on Flatwillow creek to supply supplemental irrigation to 10,000 acres of land. The total cost of the project (loan only) is estimated at $20.20 per acre of irrigated land or an annual amortization cost of $1.35 per acre. Title to the irrigable area is held by 48 land owners or an average of 208 acres per owner. Estimating an average farm unit to consist of 120 acres irrigated, the project will support 83 farm families or 35 new families in addition to the present land owners.

GLACIER COUNTY

CPB (April 29, 1939)

"Possibilities of relocating stranded farm families: poor for immediate action. However, there has been an irrigation project north of Cut Bank, of around 14,000 acres, which could be completed for around $60.00 per acre if a diversion ditch could be constructed through indian land, and diversion of water on the reservation permitted. These 14,000 acres would sustain from 40 to 70 families. This project has been surveyed. Land could be purchased at around $10 to $15 per acre.

"Concerning the supplemental water for existing area, this occurs only on the Reservation and their land re-purchase program calls for the buying of white owned land (irrigated) by the federal government and the placing of Indians on it. This is the proposed solution of its own problems.

"Reestablishment of families could be attained in Glacier County through purchase of some deeded lands (dry farming) on the reservation; provided, the units were large enough to enable a man to have 400 acres to 250 acres of crop each year. This would mean compensatory Agricultural Adjustment Administration base adjustments as these lands are now in sod. If the proposed (A) North Cut Bank Irrigation Project could be developed, families could be established as mentioned previously. If the dry land area suitable for farming on the reservation (now in sod) could be farmed, families could be located.

It is estimated that 250 to 300 families could be resettled on white owned land if maximum development took place. The indian reservation as mentioned has their own program."

GOLDEN VALLEY COUNTY

See Musselshell County.

GRANITE COUNTY

SWCB

210 Flint Creek Project (FWA Docket No.Mont. 1009-R)

This project consists of a storage reservoir and canals to supplement the irrigation of 25,000 acres of land in Flint creek valley. The project is completed and operating. The total cost of the project (loan only) is estimated at $11.36 per acre of irrigated land or an annual amortization cost of 80 cents per acre. Title to the irrigable area is held by 120 land owners or an average of 208 acres per owner.

The project is composed of two widely separated types of crop producing areas, one of which is suitable for general farming; while the other area, on account of altitude and climatic conditions, is suitable for stock raising. It is estimated that the lower portion of the project will support 76 additional families on farms of 100 acres each; and the upper portion will support 12 new families on 200 acre farms. The upper portion of the project is near the Missoula National Forest where grazing permits may be obtained.

HILL COUNTY

CPB (May 1, 1939)

"Possibilities of relocating stranded farm families:

"A preliminary survey has just been made of the (152) Marias Project which would bring 100,000 acres of land under irrigation in Hill County. On the basis of 80 acres to the family, this would provide locations for 1250 families. The estimated cost of construction of this project cannot be given at the present time as the recommendations of the survey engineer will not reach the Bureau of Reclamation until about May 30. We have given consideration to the development in this county only.

55 Beaver Creek Project

"Development of Beaver Creek Project would give an adequate water supply for the irrigation of 3000 acres which is under the original project with an addition of from 600 to 700 acres available on the project with more adequate water supply. This area with an adequate water supply would easily care for 60 to 75 families.

"(A) There are approximately 5000 acres between Fresno dam on Milk river and the east line of the county where pump projects could be constructed. Units under this development would vary from 50 to 60 or 70 acres. This area could take care of 60 to 75 families.

"Estimated price at which lands can be obtained: It is impossible to say under Marias Project at what price the land could be obtained because at the present time we have no estimate as to the cost of getting the water on the land. Land under Beaver Creek Project can be secured for $60 to $100 per acre and the land along Milk river can be secured in its undeveloped state at around $25 to $30 per acre. There is so much variation in this land it would be very difficult to estimate the cost of construction for the smaller units.

"There are no drainage areas within the county which could be developed for the relocation of families. There are no cut-over lands in the county.

"If development of the above-mentioned projects can be consummated, we could then take care of the stranded farm families in this county."

SWCB

55 Beaver Creek Storage Project (P.A Docket No. Mont. 1046)

It is proposed to build a storage reservoir on Beaver creek to supply supplemental irrigation for 3300 acres along Beaver creek valley. Total cost of the project (loan only) is estimated at $30.73 per acre or an annual amortization cost of $2.31 per acre. Title to the irrigable area is held by 21 land owners or an average of 157 acres per owner.

The project should be developed for subsistence homesteads, with units averaging 40 acres each. On the basis of 40 acres of irrigated land per unit there will be room for 82 farm families, or 61 new families in addition to the present land owners.

JEFFERSON COUNTY

See Madison County.

JUDITH BASIN COUNTY

CPB (April 22, 1939)

"Ackley Lake: Number of acres, 6000; number of economic family units, 18.

"Providing supplemental water to existing areas: Ackley Lake (increase capacity of storage project); number of acres, 4000; 12 units of 320 acres. Estimated cost of construction, $20,000; estimated price at which lands can be obtained, $4.00 per acre.

"With the extension of Ackley Lake Project and the development

of smaller water projects over the county, we believe that Judith Basin County will be able to maintain its present population. It does not appear to have possibilities of absorbing population from other areas however. It will take some time for the Ackley Lake Irrigation Project to get lined up to produce crops in a regular system of irrigation and demonstrate its success so that people will locate there on a unit of 320 acres."

SWCB

277 Ackley Lake Project (PWA Docket No. Mont. 1095-D)

This project consists of a storage reservoir to supplement the irrigation of 5000 acres of land along Judith river valley. The project is completed and operating. The total cost (loan only) is estimated at $10.80 per acre or an annual amortization cost of $1.05 per acre. Title to the irrigable area is held by 33 land owners or an average of 151 acres per owner. Estimating an average farm unit to consist of 100 acres of irrigated land, the project will support 50 families, or 17 new farm families in addition to the present land owners.

525 Pig Eye Basin Storage Project (PWA Docket No. Mont. 1258)

It is proposed to build a storage reservoir on the upper Judith river to supplement the irrigation of 7000 acres of land along Judith river. The total cost of the project (loan only) is estimated at $33.84 per acre or an annual amortization cost of $2.66 per acre. Title to the irrigable area is held by 30 land owners or an average of 233 acres per owner. Population living on the project is 120 persons. Estimating an average farm unit to consist of 80 acres irrigated, the project will support 87 farm families, or 57 new families in addition to the present land owners.

LAKE COUNTY

CPB (April 22, 1939)

"The committees feel as though there is room for approximately 100 additional families to be settled in this county. However, these families must have sufficient funds of not less that $2,500 in order to become established.

"There is some new land which will be developed in the county upon the completion of the (A) Polson Pumping Plant. This new land has been used for farming purposes, being used largely for cash grain crops. The estimated cost of construction for irrigation charges will be approximately $70.00 per acre. The price of land in the county ranges from $50.00 to $100.00 per acre, depending upon the location of the soil type, along with improvements.

"At the present time we do not have any drainage areas. However, in one or two of the older irrigated sections indications are that drainage will be necessary within a few years. No estimates have been made as to the cost of this drainage.

"There is a large portion of the migratory families of the county now settled on cut-over lands. The county committees generally think it is going to be an impossibility for these people to make a living on this cut-over land. Many of these people are specializing in fruit and poultry which seem to fit in well on the cut-over land.

"The committees believe that a large number of stranded and migratory families will leave the county once economic conditions become more stable. With the limited amount of resources within the county it is doubtful that more than 100 families of the 450 who are in the county can really become permanently established here. The committees think that the reestablishment of families should take place on the irrigated lands on which diversified farming can be practiced.

"Generally an eighty acre unit is a minimum for an economic unit for a family to make a living. Approximately one-third of the land of Lake County is owned by the Indian Department which does not pay any taxes and this land is not for sale to white people. The Indian owned land is being leased to white farmers and it is the aim of the Indian Department to gradually get the indian folks to handle their own land and thus the white farmers will have to look to other places for a means of livelihood."

FSA

(B) West Polson Project

Water supply from Flathead Lake; gross acreage, 2462; net irrigable, 1800; 23 farm units averaging 107 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 49,240	Per unit	$ 2,140
Construction and development		184,000		8,000
		$ 233,240		$ 10,140

LEWIS & CLARK COUNTY

CPB (April 1939)

"Possibilities of relocating stranded farm families: One new project near Dearborn river in northern Lewis and Clark County being 20/ considered; number of acres, around 10,000; part would be used for supplementary water on present ranches, and part on new land. Number and size of economic family units: indefinite at present; in general may take care of people now on uneconomic units and a few of those stranded, but little if any available for new families.

"Providing supplemental water for existing areas: (73) Milan Project, north and west of Augusta - practically all supplemental water; number of acres, 10,000. Pracically no land for new families. Existing

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20/ This project is called "Dearborn-Crown Butte". For outline see Cascade County under SWCB.

ranch units and additional water to stabilize livestock industry.

FSA

(A) Collins Land Company

Water supply from Missouri river; gross acreage, 11,.50; net irrigable, 3600; 60 farm units averaging 199.16 acres; type of project, community; type of farming, general stock; present ownership, corporation; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 170,000	Per unit	$ 2,833
Construction and development		420,000		7,000
		$ 590,000		$ 9,833

SWCB

73 Milan Reservoir Project (PWA Docket No. Mont. 1223)

It is proposed to divert Smith and Ford creeks into the Milan reservoir to be used for supplemental irrigation of 10,000 acres of land along Smith-Ford creek valleys. Total cost of project (loan only) is estimated at $14.40 per acre or an annual amortization cost of 1.03 per acre. Title to the irrigable area is held by 40 land owners or an average of 250 acres per owner. Population living on the project is 250 persons. Estimating an average farm unit to consist of 80 acres irrigated, the project will support 125 families or 85 new farm families in addition to the present land owners.

LIBERTY COUNTY

See Toole County.

LINCOLN COUNTY

SWCB

586 Glen Lake Project (PWA Docket No. Mont. 1184)

This project was completed in 1919 as a state irrigation district and has been operating ever since. Improvements are being made at present under Public Works Administration loan and grant of $15,455.00. Water is diverted from Therrault and Graves creeks into storage at Glen lake, thence distributed through a system of canals to irrigate a net area of 2028 acres near Eureka. Rehabilitation cost (loan only) is estimated at $4.19 per acre. Prior construction cost has been liquidated. The project comprises 38 individual farms, or an average of 53 irrigable acres per farm. In the absence of other data it would appear at the present time that no opportunities for new farm families exist.

MADISON & JEFFERSON COUNTIES

CPB (April 1, 1939)

"Possibilities of relocating stranded farm families:

58 "Whitetail Irrigation Project (Jefferson County) North of Whitehall; 4000 acres irrigable land; 40 family units; $70,000, cost of increasing size of present dam and reconditioning ditches. $10 to $20 per acre, probable purchase price.

221 "Pipestone Bench Project (Jefferson County) West of Whitehall; 3500 acres of irrigable land; 35 family units; $20,000, to recondition canals and ditches, plus 65 cents to 75 cents additional cost per acre foot of water. $10 to $15 per acre possible purchase price.

"Ruby River Project (Madison County) In vicinity of Alder, Laurin and Sheridan. By construction of two large canals, 20 to 30 additional families could be located by dividing some of the present ranches and putting some idle ground under irrigation which is not being irrigated at present. Canals would furnish supplemental water from Ruby River Reservoir.

"Stranded families could be reestablished on the above projects. On the first one mentioned the water supply needs to be incresed and some new ditches dug to distribute the water. Dams have already been built for the last two projects so only canals are needed for distribution. The first two projects mentioned have formerly been under irrigation but dry years reduced water supply; and ditches, fences, buildings, etc., were allowed to deteriorate after the farmers moved off the land. The land under the last project is mostly in large ranches or farms at present time. Ditches would make it possible to secure supplemental water. It would then be possible to subdivide some of this land and still haveeconomic units. There is also a little new sod land which could be farmed back into production with the water which would be available. These three projects would probably take care of the needs of most of the local migratory or stranded families."

FSA

(A) Parrot Ranch (Madison County)

Water supply from Jefferson river; gross acreage, 1680; net irrigable, 1020; 15 farm units averaging 112 acres; type of project, community; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 45,000	Per unit	$ 3,000
Construction and development		105,000		7,000
		$ 150,000		$ 10,000

SWCB

65 Upper Boulder River Storage Project (Jefferson County) (PWA Docket No. Mont. 1001)

It is proposed to build a storage reservoir on Boulder river to supply supplemental irrigation to 6600 acres of land along Boulder river valley. The total cost (loan only) is estimated at $16.67 per acre or an annual amortization cost of $1.54 per acre. Title to the irrigable area is held by 28 land owners or an average of 235 acres per owner. Estimating an average farm unit to consist of 100 acres irrigated, the project will

support 66 farm families or 38 new families in addition to the present owners.

68 Whitetail Irrigation Project (Jefferson County) (PWA Docket No. Mont. 1180)

It is proposed to build a storage reservoir on Whitetail creek and canals to irrigate 4000 acres of land adjacent to the town of Whitehall. Part of the storage facilities were completed several years ago. The total cost of the project (loan only) is estimated at $18 per acre or an annual amortization cost of $1.50 per acre. Title to the irrigable area is held by 24 land owners or an average of 167 acres per owner. Estimating an average farm unit to consist of 120 acres irrigated, the project will support 33 farm families or 9 new families in addition to the present owners.

221 Pipestone Bench Project (Jefferson County)

This project was completed a number of years ago and later taken over by the Water Board. It consists of a storage reservoir on Pipestone creek, and canals to irrigate 2500 acres of land on Pipestone Bench, west of Whitehall. The Water Board's sponsorship in rehabilitating the project amounts to $3.25 per acre of irrigated land. No data are available as to the number of land owners but it is estimated that the project will support at least 5 new families on an irrigated area of 120 acres each.

283 Jefferson River Diversion Project (Jefferson County) (PWA Docket No. Mont. 1096)

It is proposed to enlarge and extend a ditch from Jefferson river to irrigate a total of 11,000 acres of land in the vicinity of Whitehall. The total cost (loan only) is estimated at $8.84 per acre or an annual amortization cost of 70 cents per acre. Title to the irrigable area is held by 85 land owners or an average of 130 acres per owner. Population living on the project is 225 persons. Estimating an average farm unit to consist of 120 acres irrigated, the project will support 92 farm families or 7 new families in addition to the present owners.

78 Ruby River Storage Project (Madison County) (PWA Docket No. Mont. 1104-D)

This project consists of a storage reservoir on Ruby river to supply supplemental water for 30,000 acres of land in Ruby valley. The project is completed and operating. The total cost (loan only) is estimated at $7.17 per acre or an annual amortization cost of 57 cents per acre. Title to the irrigable area is held by 132 land owners or an average of 151 acres per owner. Estimating an average farm unit to consist of 100 acres irrigated, the project will support 300 farm families or 101 new families in addition to the present owners.

540 Ruby River East Side Canal (Madison County) (PWA Docket No. Mont. 1180)

It is proposed to construct a canal along the east side of Ruby valley to convey water for supplemental and new irrigation of 11,650 acres. The total cost of the project (loan only) is estimated at $10.13 per acre or an annual amortization cost of 78 cents per acre. Title to

the irrigable area is held by 90 land owners or an average of 130 acres per owner. Estimating an average farm unit to consist of 100 acres irrigated, the project will support 116 farm families or 26 new families in addition to the present owners.

McCONE COUNTY

See Richland County.

MEAGHER COUNTY

CPB (April 1939)

"Possibilities of relocating stranded farm families: 617 Proposed Dorsey Storage Project, 3000 acres; 30 economic family units.

536 "South Side Canal; 500 acres, 5 family units. Estimated cost of construction, $170,000; estimated price at which lands can be obtained, $5 to $8. Probably cannot handle more than locally stranded families for some years. Type of enterprise would be small diversified, irrigated farms, raising some cash grain for local sale."

SWCB

82 North Fork of Smith River Storage Project (PWA Docket No. Mont. 1008- R)

A reservoir was completed on North Fork of Smith river to supply supplemental irrigation to 11,000 acres of land along the river valley, below White Sulphur Springs. The total cost of the project (loan only) is estimated at $13 per acre of irrigated land or an annual amortization cost of 90 cents per acre. Title to the irrigable area is held by 30 land owners or an average of 367 acres per owner. Population living on the project is 170 persons. Estimating an average farm unit to consist of 100 acres irrigated, the project will support 110 families or 80 new families in addition to the present land owners.

536 South Side Canal

A canal was built to divert water from North Fork of Smith river and also storage water from the reservoir to irrigate 2000 acres of land south of White Sulphur Springs. No figures are available as to the number of land owners, but on the same basis as figures above for the north fork reservoir project, this project will support about 8 new families.

MINERAL COUNTY

No data available.

MISSOULA COUNTY

CPB (April 28, 1939)

"Possibilities of relocating stranded farm families: Irrigation development, none now. Estimated price at which lands can be obtained,

$75 per acre.

(Extent believed possible to reestablish migratory or [illegible] randed families) "About 15 families in next five years on Frenchtown Irrigation Project, as large units are split into small units.

"All of above estimates made by County Extension Agent. The Planning Board has not met since this outline was received."

S.C.B.

605 Missoula Valley Irrigation Project (FWA Docket No. Mont. 1249)

It is proposed to divert water from Blackfoot and Clark Fork rivers to irrigate 12,000 acres of land in the vicinity of Missoula. The area is susceptible of intense cultivation and will be ideal for subsistence homesteads. The total cost of the project (loan only) is estimated at $32.08 per acre of irrigated land or an annual amortization cost of $2.45 per acre. Title to the irrigable area is held by 350 land owners or an average of 34 acres per owner. Population living on the project is 2100 persons. Estimating an average farm unit to consist of 20 acres irrigated, the project will support 600 farm families or 250 new families in addition to the present land owners.

MUSSELSHELL AND GOLDEN VALLEY COUNTIES

"There are no new irrigation projects in either one of the counties being developed. The Dead Man's Basin project is a project to supply supplemental water to already established irrigated acres. The number of acres in this area is 20,000. The number and size of economical farm units would be 160 acres with two or three sections of dry land for pasture. There has been $735,000 already spent on this project; which has been mostly Works Progress Administration labor, and it will take about $315,000 to complete the project.

"The price of the land at the present time is from $3.00 to $10.00 per acre; no one can guess as to the price of the land if the Basin should be completed. In the event the basin is completed, the ranchers will still have the problem of getting the water out of the river, and also problem of leveling the land and putting in proper ditches to be able to irrigate and make economical use of the water when they get it.

"If this project were completed, it would be possible to take care of more farm families in either one of the counties, as we have already had many families moved from these counties into other areas."

FSA

(A) Wolfolk Ranch (Musselshell County)

Water supply from Musselshell river; gross acreage, [illegible]; net irrigable, 1500; 15 farm units averaging 67 acres; type of project,

community; type of farming, general stock; present ownership, private; type of development needed, buildings, lands, fencing, irrigation and reservoir.

Estimated cost of land	Total	$ 65,000	Per unit	$ 4,333
Construction and development		108,000		7,200
		$173,000		$11,533

(B) Musselshell County Homesteads (Musselshell County)

Water supply from Musselshell river; gross acreage, 2410; net irrigable, 350; 70 farm units averaging 35 acres; type of project, subsistence; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 45,000	Per unit	$ 643
Construction and development		390,000		5,571
		$435,000		$ 6,214

92 Dead Man's Basin Project (both counties)

It is proposed to divert water from Musselshell river into Dead Man's Basin for storage to supplement the irrigation of 20,000 acres of land along the lower Musselshell river valley. The project is partly completed. An application is pending with RFC for a loan to sponsor Works Progress Administration to complete the project. The total sponsorship cost is estimated at $10 per acre of irrigated land. The number of land owners is not known, but it is estimated that the project will support at least 50 new families, each having 100 acres irrigated land.

308 Newton Ditch (Musselshell County (PWA Docket No. Mont. 1272)

It is proposed to rehabilitate a canal diverting water from Musselshell river at Roundup, to irrigate 5,000 acres of land. Supplemental water supply would come from Dead Man's Basin. The total cost (loan only) is estimated at $24 per acre of irrigated land or an annual amortization cost of $1.87 per acre. Title to the irrigable area is held by 50 land owners or an average of 100 acres per owner. Population living on the project is 200 persons. Estimating an average farm unit to consist of 80 acres irrigated, the project will support 37 farm families or 7 new families in addition to the present land owners.

PARK COUNTY

CPB (April 29, 1939)

"Below is some information relative to the study of migratory farm families. This information is not to be considered as final and definite as the work of the County Agricultural Planning Committees in Park County is not sufficiently advanced to provide for the definite material required.

"Possibilities of relocating stranded farm families: The following irrigation projects would furnish supplemental water to existing areas and in some instances supply land now dry.

(A) Rosedale-Elbow Irrigation Project twenty miles south of Livingston; diversion canal out of Yellowstone to provide supplemental water on 2200 acres. Possible new families, 5.

432 Park Branch Sweet Grass Canal Project

Park Branch Sweet Grass Canal Project is an extension of the Park County proposed Mission Ditch Project. About 2500 inches of water have been signed for in Park County. This ditch extends from Livingston east on the south side of the Yellowstone. Possible new families, 10.

(B) Elk Creek Reservoir (Sec. 33, T. 4 N., R. 5 E.)

This reservoir would store about 500 acre feet and there is a tract joining on the west which would be easy to irrigate from this site. Possible new families, 1.

(C) Porcupine Creek Reservoir (Sec. 15, T. 4 N., R. 5 E.)

This reservoir would have a capacity of 1,500 acre feet. This would be a storage reservoir for supplemental water to turn into Shields river and would not result in the change of practice on any dry area. Possible new families, 3.

(D) Lat Dam and Reservoir (Sec. 1 , T. 5 N., R. 10 E.)

This site has been surveyed by State Water Conservation Board. It is estimated the storage capacity would be 80,000 acre feet of water which would be available for use along the river as supplemental water and to cover present dry land as far south as Horse creek where topography would permit. Possible new families, 20.

(E) Antelope Reservoir (Sec. 17, T. 4 N., R. 7 E.)

This site has a capacity of 3,10 acre feet according to the Water Board survey and there is plenty land available for irrigation joining this site on the south. Possible new families, 30.

35 Potter Basin Reservoir (Sec. 11, T. 4 N., R. 8 E.)

This reservoir has a capacity of 8 , acre feet according to State Water Conservation Board and the surveyed ditch on the west side of Shields river reaches to Looking Glass creek, 14 miles south of the dam site. This ditch is over 20 miles long according to the survey. Most of the area covered by the upper end of this ditch is now pasture and the lower end is dry farming area. Possible new families, 5 .

(F) Wilsall Dam (Sec. 19, T. 5 N., R. E.)

This reservoir is not surveyed but we estimate its capacity as 30,000 to 4 ,000 acre feet. It would furnish supplemental water for Shields river and irrigate a tract south of Wilsall which is now

dry land farmed. This reservoir has an advantage of being located close to Wilsall and it could be filled by all the streams, west, north and east of Wilsall giving it a fine drainage area. Possible new families, 50.

(G) Small Wilsall Dam (Sec. 19, T. 3 N., R. 9 E.)

This site is located about one mile north of Wilsall and would have a capacity of about 2,000 acre feet. This would be an inexpensive reservoir to construct in that it is close to town and all the materials are close at hand. The land which could be irrigated from this reservoir is immediately south of Wilsall and lies very well to irrigate, and is now dry land. Possible new families, 5.

(H) Kistner and Hardy Dam

This dam was constructed in 1920 and has a present capacity of about 250 acre feet. It could be enlarged to 4,000 acre feet. Additional land to irrigate lies east of the reservoir and was once farmed as dry land, but is now pasture. Possible new families, 5 or more.

(I) Muddy Reservoir (Sec. 21, T. 3 N., R. 8 E.)

This is a small reservoir which would have a possible capacity of 300 acre feet and the water would be used for supplemental purposes on land already irrigated. Possible new families, 1.

(J) D'Ewart Reservoir (Sec. 20, T. 3 N., R. 8 E.)

A small site with a capacity of about 300 acre feet which would irrigate about 100 acres immediately joining the reservoir which is now farmed as dry land.

(A) The Rosedale-Elbow Irrigation Project

Project cost is estimated at about $15,000. Estimates on the Park Branch-Sweet Grass Canal forecast, $23 per acre for the completion of this project. Definite cost figures on the dam and reservoir sites are not available, but those which have been surveyed by the State Water Conservation Board no doubt have cost figures estimated for them.

It would seem to us that if the possible irrigation projects in Park County were constructed there would be plenty of opportunities for the re-establishment of migratory or stranded families in this county.

FSA

95 Shields River Project

Water supply from Shields river; gross acreage, 16,000; net irrigable, 4000; 30 farm units averaging 533 acres; type of project, community; type of farming, general stock; present ownership, corporation; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 90,000	Per unit	$ 3,000
Construction and development		216,000		7,200
		$306,000		$10,200

432 Mission Ranch (east of Livingston on south side of river)

Water supply from Yellowstone river; gross acreage, 3000; net irrigable, 1500; 15 farm units averaging 200 acres; type of project, community; type of farming, general stock; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 40,000	Per unit	$ 2,666
Construction and development		108,000		7,200
		$148,000		$ 9,866

(K) Spring Creek Tract (location unknown)

Water supply from Spring creek; gross acreage, 1250; net irrigable, 688; 10 farm units averaging 125 acres; type of project, community; type offarming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 38,000	Per unit	$ 3,800
Construction and development		72,000		7,200
		$110,000		$11,000

S.C.B.

225 Park Branch Canal (FWA Docket No. Mont. 1010-R)

This project has been constructed and is operating. It consists of a canal diverting water from Yellowstone river to irrigate 10,000 acres along the valley above Livingston. The total cost of the project (loan only) is estimated at $6.80 per acre of irrigated land, or an annual amortization cost of $1.00 per acre. Title to the irrigable area is held by 26 land owners, or an average of 385 acres per owner. Estimating an average farm unit to consist of 80 acres irrigated, the project will support 125 farm families, or 99 new families in addition to the present land owners.

233 Livingston Ditch Project (FWA Docket No. Mont. 1060-R)

This project has been constructed and is operating. It consists of a ditch diverting water from Yellowstone river to irrigate 3000 acres in the vicinity of Livingston. The irrigated area will eventually be cut into small subsistence homesteads. The total cost of the project (loan only) is estimated at $7.33 per acre of irrigated land or an annual amortization cost of 60 cents per acre. Title to the irrigable area is held by 77 land owners or an average of 39 acres per owner. Estimating an average unit to consist of 20 acres irrigated, the project will support 150 farm families or 73 new families in addition to the present owners.

140 Mill Creek Project (FWA Docket No. Mont. 1047)

It is proposed to build a storage reservoir on Mill creek

to irrigate 4000 acres of land in the creek valley. The total cost of the project (loan only) is estimated at $24.34 per acre of irrigated land or an annual amortization cost of $1.86 per acre. Title to the irrigable area is held by 38 land owners or an average of 105 acres per owner. Population living on the project is 142 persons. Estimating an average farm unit to consist of 80 acres irrigated, the project will support 50 farm families or 12 new families in addition to the present owners.

95 Shields River Project (PWA Docket No. Mont. 1061)

It is proposed to build a storage reservoir on Shields river to supplement the irrigation of 25,000 acres of land in Shields river valley. The total cost of the project (loan only) is estimated at $25.20 per acre of irrigated land or an annual amortization cost of $1.90 per acre. Title to the irrigable area is held by 340 land owners or an average of 104 acres per owner. Population living on the project is 500 persons. For resettlement opportunities see FSA above.

PETROLEUM COUNTY

See Garfield County.

PHILLIPS COUNTY

CPB (April 29, 1939)

"Possibilities of relocating stranded farm families:

"New Irrigation Development

542	Saco Divide	9,000 acres	90 units
(A)	Phillips Project	12,000 acres	70 units
102	Sun Prairie	3,000 acres	25 units
101	Beaver Creek	5,500 acres	40 units
(B)	Matador	2,500 Acres	20 units
	TOTAL...	32,000 acres	245 units

"By providing supplemental water to existing areas

(C)	North Dodson	2,000 acres	17 units
(D)	Nelson North Canal	5,000 acres	40 units
	TOTAL...	7,000 acres	57 units

"At present there are approximately 50 families living in the areas where new irrigation projects can be developed. In the Milk river valley supplemental area, there are now about 15 families located. It is assumed that these families would remain on 80 to 120 acre units formerly owned by them, and that the balance of the irrigable lands could be used for relocating other people from within the county.

"The average cost of developing raw lands for irrigation in Milk river valley is about $30 per acre, according to the most reliable figures available. Average piece of undeveloped irrigable land suitable for irrigation farming is about $28 per acre.

"No extensive areas in Phillips County can be reclaimed by drainage. However, there are about 40,000 acres of heavy gumbo soils in the valley which might be developed if and when a practical and profitable use for this type of land is determined.

It is our opinion that with the irrigation possibilities and resources we have in Phillips County, all of our migratory and stranded families can be re-established eventually."

FSA

101 Beaver Creek Project

Water supply from Beaver Creek; gross acreage, 17,686; net irrigable, 11,044; 67 farm units averaging 321.46 acres; type of project, community; type of farming, stock; present ownership, corporation; type of development needed, buildings, lands, fencing, irrigation and reservoir.

Estimated cost of land	Total	$259,343	Per unit	$ 4,610
Construction and development		506,370		7,765
		$765,713		$12,375 21/

SWCB

The Water Board files show several proposed projects in Phillips County, but on account of insufficient data they are not included in this report.

PONDERA COUNTY

FSA

(A) Valier Project

Water supply from Birch and Dupuyer creeks; gross acreage, 12,000; net irrigable, 12,000; 100 farm units averaging 120 acres; type of project, infiltration; type of farming, general; present ownership, corporation and private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$270,000	Per unit	$2,700
Construction and development		700,000		7,000
		$970,000		$9,700

SWCB

The Water Board files show several proposed projects in Pondera County but on account of insufficient data they are not included in this report.

21/ Figures copied from FSA report. Computations are incorrect. Planning Board revised figures to 67 units at 264 acres each.

POWDER RIVER COUNTY

SWCB

The Water Board files show many proposed projects in Powder River County, but on account of insufficient data they are not included in this report.

POWELL COUNTY

SWCB

182 Nevada Creek Storage Project (PWA Docket No. Mont. 1007-DS)

A reservoir has been constructed to supply supplemental water to 10,000 acres along Nevada Creek in the vicinity of Helmville. Total cost of project (loan only) is estimated at $14.20 per acre of irrigated land or an annual amortization cost of $1.13 per acre. Title to the irrigable area is held by 30 land owners or an average of 333 acres per owner. Estimating an average farm unit to consist of 120 acres irrigated, the project will support 83 families or 53 new families in addition to the present land owners.

105 Race Track Creek Storage Project (PWA Docket No. Mont. 1086)

It is proposed to build a storage reservoir on Race Track creek to supplement the irrigation of 6000 acres in Race Track creek valley. Total cost of the project (loan only) is estimated at $14.45 per acre of irrigated land or an annual amortization cost of $1.09 per acre. Title to the irrigable area is held by 40 land owners or an average of 150 acres per owner. Population living on project is 150 persons. Estimating an average farm unit to consist of 80 acres irrigated, the project will support 75 families or 35 new families in addition to the present owners.

411 Little Blackfoot-Cottonwood Storage Project (P A Docket No. Mont. 1185)

It is proposed to build a storage reservoir on the head waters of Little Blackfoot river and by means of canals and tunnels to divert the water thru the divide to supplement irrigation of 3000 acres of land along Cottonwood creek in the vicinity of Deer Lodge. Total cost of the project (loan only) is estimated at $44.33 per acre of irrigated land or an annual amortization cost of $2.87 per acre. Title to the irrigable area is held by 27 land owners or an average of 111 acres per owner. Population living on the project is 74 persons. Estimating an average farm unit to consist of 60 acres irrigated, the project will support 50 farm families or 23 new families in addition to the present owners.

PRAIRIE COUNTY

CPB (April 28, 1939)

Possibilities of relocating stranded farm families are very satisfactory with some irrigation development.

(A) "Buffalo Rapids Pumping Unit No. 1, located [illegible] Glendive; number of acres, 978 in Prairie County, which [illegible] economic units for settlement.

(B) "Buffalo Rapids Pumping Unit No. [illegible], located between [illegible] and Fallon; number of acres, 16,[illegible] in Prairie County; [illegible] acres each.

"Estimated cost of construction: Unit No. 1, [illegible]; Unit No. 2, [illegible] per acre. Estimated price at which lands can be [illegible]: [illegible] to $14.

"It is anticipated that no drainage will be necessary. However, the Reclamation Service has earmarked [illegible] to take care of any drainage which may be necessary under pumping unit No. 1. [illegible] cut-over lands.

"Migratory and stranded farm families may be re-established in Prairie County in an economic manner by the development of irrigation. In order to make any project feasible, it must have good land, water in abundance, and settlers looking for the opportunity to make a stable income with the hazards of crop failure taken out.

"Prairie County has all three of these requisites. [illegible] acres of excellent land as classed by [illegible] Reclamation Service as numbers one and two irrigation land. Yellowstone river runs through the area with a volume of water sufficient to flood all of eastern Montana nine inches deep, which would more than provide the water requirement of such a project.

"With 10[illegible] families living in the county in anticipation of irrigation and more coming through every day, the problem of colonization is of minor consequence.

"The completion of the Buffalo Rapids Irrigation Project in its entirety would stabilize the livestock industry for [illegible] counties in southeastern Montana by providing cheap feed in years of drought and would provide homes and occupations for farm families which would contribute to make a satisfied rural people and do away with the relief problem." 22/

[illegible] COUNTY

[illegible]

(A) Bitter Root Stock Farm [illegible] northeast of Hamilton

Water supply from Bitter [illegible] river; gross [illegible]

21/ Buffalo Rapids Project [illegible] built by [illegible] Custer, Dawson and Prairie [illegible] project. See [illegible] County [illegible] details.

net irrigable, 5600; 100 farm units averaging 60 acres; type of project, infiltration; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$240,000	Per unit	$2,400
Construction and development		720,000		7,200
		$960,000		$9,600

SWCB

257 West Fork of Bitter Root Storage Project (PWA Docket No. Mont. 1053-DS)

A dam is now under construction on West Fork of Bitterroot river to supply supplemental irrigation to 32,000 acres of land along the river valley between Hamilton and Florence. The total cost of the project (loan only) is estimated at $25.20 per acre of irrigated land or an annual amortization cost of $1.67 per acre. The area is well settled and intensively farmed, but it is estimated that about 10 new families could be located on tracts of 80 acres each.

115 Bear Creek Storage Project (PWA Docket No. Mont. 1005)

It is proposed to build a storage reservoir on Bear creek to supply supplemental irrigation to 2500 acres of land in the vicinity of Victor. The total cost of the project (loan only) is estimated at $25.20 per acre of irrigated land or an annual amortization cost of $1.64 per acre. Title to the irrigable area is held by 31 land owners or an average of 81 acres per owner. Estimating an average farm unit to consist of 60 acres irrigated, the project will support 42 farm families or 11 new families in addition to the present land owners.

110 Blodgett Creek Storage Project (PWA Docket No. Mont. 1252)

It is proposed to build a storage reservoir in Blodgett creek canyon to supply supplemental irrigation to 5000 acres of land west of Hamilton. The total cost of the project (loan only) is estimated at $47.60 per acre of irrigated land or an annual amortization cost of $3.83 per acre. Title to the irrigable area is held by 65 land owners or an average of 77 acres per owner. Estimating an average farm unit to consist of 60 acres irrigated, the project will support 83 families or 18 new families in addition to the present land owners.

606 Florence Irrigation District (PWA Docket No. Mont. 1259)

It is proposed to build storage reservoirs on 8 small lakes in Bitterroot mountains to supply supplemental irrigation to 6500 acres of land located on the west side of the valley between Stevensville and Florence. The total cost of the project (loan only) is estimated at $10.31 per acre of irrigated land oran annual amortization cost of 81 cents per acre. No information is available concerning the number of people living on the land at the present time, but it is estimated that 10 new families, having 60 irrigable acres each, could be located on this project.

CPB (April 28, 1939)

"We feel that there would be a possibility of relocating at least 250 more of our farm families under irrigation if we can get the east side pumping project, across the river from Sidney, fully developed; the Savage Pumping Project across the Canal from Savage; the Mohly, Culbertson, Brockton and the territory across from Poplar, these lying along the Missouri river which would total 20,000 acres of irrigable land. At the present time, the east side pumping project is in the process of construction but until water has been actually put on the land and a definite repayment plan has been worked out that operators will be able to pay to the State Water Conservation Board, the resettlement will not be very rapid, although there are a few going on and it is possible that about 600 to 800 acres of the 3000 acres will be actually put under water this year.

"One of our biggest projects as far as land use in Richland County is the readjustment of farm families. As a matter of fact, there are about 500 dry land farmers in Richland County who have approximately 320 acres as a farming unit which is much too small.

FSA

(A) East Sidney Project (location unknown)

Water supply from Yellowstone river; gross acreage 5245; net irrigable, 2000; 20 farm units averaging 262 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 47,500	Per unit	$ 2,375
Construction and development		140,000		7,000
		$187,500		$ 9,375

(B) East Sidney Project (location unknown)

Water supply from Yellowstone river; gross acreage, 4000; net irrigable, 3000; 50 farm units averaging 80 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 40,000	Per unit	$ 800
Construction and development		410,000		8,200
		$450,000		$ 9,000

206 Savage Pumping Project

Water supply from Yellowstone river; gross acreage, 3000; net irrigable, 2000; 25 farm units averaging 80 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing, irrigation and reservoir.

Estimated cost of land	Total	$ 20,000	Per unit	$ 800
Construction and development		205,000		8,200
		$225,000		$ 9,000

acres of irrigable land are located in the county. This acreage includes lands adjacent to Missouri river, Poplar river and Muddy creek. Part of this area is located in Fort Peck Indian Reservation and part outside. This area would support approximately from 800 to 850 farm families if brought under irrigation.

"About 104,395 acres of this irrigable land is owned by indians or controlled by the Fort Peck Indian Agency; 3880 acres are state owned; 1850 acres are county owned; 3960 acres are corporate owned; and 54,005 acres are owned by whites. Of the privately owned land the committee feels that most of it could be purchased for about $10 per acre.

"Through development of the entire area, felt suitable for irrigation, all families living in the county now on uneconomic units or unprofitable farms could be located on irrigated farms. Of the approximately 800 to 850 farm families which an irrigated section could support, 134 white operators are now living in the irrigable area. In the case of development of irrigable lands on the indian reservation, there would be a considerable number of indian owners who would probably eventually settle in this area. This situation would limit the number of white farmers who could be relocated there."

FSA

(A) Roosevelt County (Location unknown)

Water supply from Missouri river; gross acreage, 25,000; net irrigable, 4000; 25 farm units averaging 1000 acres; type of project, infiltration; type of farming, general stock; present ownership, private; type of development needed, buildings, lands fencing and irrigation.

Estimated cost of land	Total	$ 61,000	Per unit	$ 2,440
Construction and development		180,000		7,200
		$241,000		$ 9,640

(B) Hog Ranch (location unknown)

Water supply from Missouri river; gross acreage, 3000; net irrigable, 2000; 40 farm units averaging 75 acres; type of project, community; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 48,000	Per unit	$ 1,200
Construction and development		280,000		7,000
		$328,000		$ 8,200

SWCB

400 Missouri River Pumping Project

The U. S. Bureau of Reclamation is making a study of irrigation of the lands on both sides of the river below Fort Peck Dam. The water supply will be developed by pumping from Missouri river, utilizing power developed at the Fort Peck Dam.

Until the Bureau completes its study, costs of construction cannot be accurately determined. It is assumed that this project will be constructed with WPA labor and that its cost will be similar to that on Buffalo Rapids Unit No. 2 (See Prairie County).

The Roosevelt County Agricultural Planning Committee estimates that there are a total of 63,695 acres of irrigable land owned by white people, corporations, county and state. Of this land, 18,325 acres have been accounted for by other projects listed above, leaving a balance of 55,370 acres in this project.

Estimating an economic unit at 80 acres of irrigable land, there is room for 692 families on this project. Of the 134 families living in the irrigable area within the county, 50 live on the Bainville Project, leaving 84 of these families living on the Missouri Pumping Project. Hence there appears to be opportunity for 604 new families.

117 Bainville Bloodwater Control Project (PWA Docket No. Mont. 1036)

It is proposed to build two storage reservoirs; one on Shotgun creek and the other on Little Muddy creek, to irrigate 10,746 acres of land. Last year Works Progress Administration constructed part of the canal system. The total cost of the project (loan only) is estimated at $13.03 per acre of irrigated land or an annual amortization cost of $1.00 per acre. Title to the irrigable area is held by 50 land owners or an average of 215 acres per owner. Population living on the project is 326 persons. Estimating an average farm unit to consist of 100 acres irrigated, the project will support 107 farm families or 57 new families in addition to the present land owners.

226 Big Muddy Flood Control Project (PWA Docket No. Mont. 1081)

It is proposed to build two low dykes across Big Muddy creek valley in the vicinity of Culbertson to provide flood irrigation on 1579 acres of land. The total cost of the project (loan only) is estimated at $11.40 per acre of irrigated land or an annual amortization cost of 86 cents per acre. Data are not available as to the number of present land owners, but it is estimated that there will be opportunities for at least 3 new families, each having an area of 160 acres.

ROSEBUD COUNTY

FSA

(A) Horton Ranch (location unknown)

Water supply from Rosebud river; gross acreage, 12,000; net irrigable, 1500; 12 farm units averaging 1000 acres; type of project, infiltration; type of farming, general stock; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 33,000	Per unit	$2,750
Construction and development		84,000		7,000
		$117,000		$9,750

SWCB

[illegible] Rosebud River Storage Project (PWA Docket [illegible]. Mont.)

It is proposed to build a storage reservoir on [illegible] to supplement the irrigation of 5500 acres of land along [illegible] valley. The total cost of the project (loan only) is estimated at [illegible] per acre of irrigated land or an annual amortization cost of [illegible] per acre. Liable to the irrigable area is held by [illegible] land owners or an average of 7[illegible] acres per owner. Population living on the project is 175 persons. Under these conditions there is probably no room for new settlers.

SANDERS COUNTY

CPB (April [illegible], 1939)

"Possibilities of relocating stranded farm families: In all irrigation development in the west end of Sanders County the development will include more cut-over land than cleared land so that the cost of clearing would have to be added not only to the purchase price but to the cost of construction of water facilities.

"119 Swamp Creek Irrigation Project, under construction: number of acres, [illegible], number of economic family units, [illegible].

"Providing supplemental water to existing areas: Possible projects on several live streams in Noxon and [illegible] areas. Number of acres, [illegible], number and size of economic family units, [illegible], units, [illegible] to 1[illegible] acres.

"Estimated price at which lands can be obtained, [illegible] per acre. Migratory or stranded families especially in the west end of Sanders County are clearing certain amount of stump land each year, and may eventually establish themselves on self-supporting units."

FSA

119 Trout (Swamp) Creek Project

Water-supply from swamp creek; [illegible] acres, [illegible]; not irrigable, [illegible]; [illegible] units averaging [illegible] acres; type of project, [illegible]; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$1[illegible],	Per unit [illegible]
Construction and development		[illegible],	[illegible]
		[illegible],	[illegible]

SWCB

119 Swamp Creek Irrigation Project (PWA Docket [illegible])

This project consists of canals to divert the natural flow of Swamp Creek to irrigate about [illegible] acres of land along the [illegible]. The

project is being built by Works Progress Administration. Details of settlement are outlined above under FSA.

SHERIDAN COUNTY

CPB (May 11, 1939)

"It does not appear that the possibilities for relocating stranded farm families in Sheridan County are enough important to mention. Some of the present stranded farm families in this county may be relocated within the county if the limited irrigation possibilities in the county are developed. This would take care of just a small number of families, and it is doubtful that it would be of enough importance to demand a great deal of attention."

SWCB

269 Upper Big Muddy Storage Project (PWA Docket No. Mont. 1100)

It is proposed to construct a reservoir on Big Muddy creek a short distance below the Canadian border to irrigate 15,000 acres of valley between the reservoir and Reserve. The total cost of the project (loan only) is estimated at $17.47 per acre of irrigated land or an annual amortization cost of $1.31 per acre. Title to the irrigable area is held by 150 land owners or an average of 100 acres per owner. Population living on the project is 575 persons. With each owner having an average of 100 irrigable acres, it appears that there are no opportunities at present for locating new families on this project.

SILVER BOW COUNTY

SWCB

251 The Board made surveys and preliminary estimates of the following small projects: Brown's Gulch, Hail Columbia, Basin creek, Yankee Doodle creek, Elk Park, Blacktail Deer creek, and Fish creek.

These projects are all small and expensive to develop. The most feasible are Brown's Gulch and Hail Columbia creek. This combination would supply water for about 3500 acres. The loan cost will vary from $35 to $45 per acre, depending upon the character of development.

There are about 19 truck gardeners and farmers who would be benefited, resulting in an average irrigated area of 184 acres per owner. The area should be divided into small subsistence tracts of 20 acres each, which would furnish homes for 175 families, or 156 new families in addition to those already owning the land. The other projects mentioned are small and not economically feasible at the present time.

STILLWATER COUNTY

CPB (April 28, 1939)

121 The Columbus Irrigation Project

"The Columbus Irrigation project with approximately 1200 acres of irrigable land will operate for the first time this year. At the present time there are four or five larger units which could be divided so as to provide ten families with units of 100 acres of irrigated land. Several of the larger units can be bought as well as several smaller farms.

"In other parts of the county there are irrigated ranches for sale which can be bought and which have been operated successfully. They can be operated successfully again if out of the stranded farm families it is possible to select the type of farmers who have managerial ability, initiative, and if it is possible for them to secure sufficient financing.

"With the exception of flood irrigation projects and diversion from intermittent streams, there is little possibility of providing supplemental water. At the present time there is a large project being discussed which would divert water from Yellowstone river and which, if completed, would irrigate thousands of additional acres in the counties bordering Yellowstone river. As this project is only a possibility at this time, and if approved would take a number of years to complete, the practicability and feasibility will not be discussed here.

"No. 1 dry land has sold for $10 to $12 per acre. Dry land prices will run from $2 to $15 per acre. Good irrigated land can be bought from $65 to $80 an acre.

"Possibility of relocating families on drainage areas: Some irrigated land is being reclaimed by drainage. In most cases this is being done by farmers now on the farms who contract privately to have drains put in. All farms needing drainage have farm families on them.

"Practically all stranded families can be reestablished in the county; provided first, they wish to return to farms; second, they have managerial ability and initiative and a desire to better their status; and third, they can secure sufficient capital to become established on an economic unit.

"Type 1: Good irrigated farms can be bought for from $10,000 to $15,000. Only the most select group should be located on these farms.

"Type 2: There is a possibility of securing small plots of irrigated ground whereby it would be possible to raise the greater part of the family living. This would fit in with the person having part time employment.

"Type 3: By purchase or long time lease of dry land, which would be used on a diversified basis with particular emphasis to the production of livestock, the blocking up of economic livestock units, development of flood irrigation possibilities and development of range and stock water resources would be invaluable."

FSA

121 Columbus Irrigation Project

Water supply from Yellowstone river; gross acreage, 1600; net irrigable, 1600; 20 farm units averaging 80 acres; type of project, infiltration; type of farming, general; present ownership, county; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 16,000	Per unit	$ 800
Construction and development		156,000		7,800
		$172,000		$ 8,600

(A) Absarokee Homestead Project (location unknown)

Water supply from Stillwater river; gross acreage, 225; net irrigable, 225; 25 units averaging 9 acres; type of project, subsistence; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 12,000	Per unit	$ 480
Construction and development		112,000		4,500
		$124,500		$4,980

SWCB

121 Columbus Irrigation Project (FWA Docket No. Mont. 1051-DS).

This project was rehabilitated last year to irrigate 2000 acres in Yellowstone valley, in the vicinity of Columbus. The original project was a state irrigation district. The yearly amortization cost is estimated at $1.56 per miner's inch for a total carrying capacity of 1550 miner's inches. Data are given above under FSA as to location possibilities.

SWEET GRASS COUNTY

CPB (April 29, 1939)

"Proposed Sweet Grass Irrigation Project, (A) Glass-Lindsay Project, and (B) Boulder River Project, involving some 60,000 acres, which possibly would provide 60 economic family units of 1000 acres each at a cost of $10,000 per unit.

"Family unit development in Sweet Grass county would have to be by creating the above water developments supplementing the present water rights and distributing sufficient water to non-irrigated lands for the production of livestock feed to sustain the now existing operating units which are forced to move to winter feed grounds, breaking up of the larger irrigated units into smaller units and developing the present Glass Project which is now irrigated into smaller units to provide for twice the number of families.

Letter of 6/24/39 regarding land values

"Lands on the Glass-Lindsay project in Sweet Grass County, consisting of 10,000 irrigable acres, ditches and all irrigation improvements now being used and in good shape can be purchased at approximately $22.50 per acre. 12,000 acres of grazing land adjacent to these irrigated lands can be purchased at approximately $7.50 per acre by purchasing the project in its entirety. This project can also be purchased on the land

classification basis, and appraised by some competent appraiser for value.

"The Sweet Grass Storage Project land is being sold from $5 to $30 per acre for the land which has irrigation water rights. Grazing land in the same vicinity is selling for $1.00 to $1.50 per acre."

FSA

(C) Big Timber Project (location unknown)

Water supply from Sweet Grass creek; gross acreage, 22,000; net irrigable, 10,000; 100 farm units averaging 220 acres; type of project, infiltration; type of farming, general stock; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$220,000	Per unit	$2,200
Construction and development		700,000		7,000
		$920,000		$9,200

(D) Big Timber Homesteads (location unknown)

Water supply from Big Timber creek; gross acreage, 200; net irrigable, 200; 40 farm units averaging 5 acres; type of project, subsistence; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 12,000	Per unit	$ 300
Construction and development		180,000		4,500
		$192,000		$4,800

SWCB

124 Sweet Grass Storage Project (PWA Docket No. Mont. 1083)

It is proposed to build a storage reservoir at the mouth of the canyon on Sweet Grass creek to irrigate 12,000 acres in the vicinity of Melville. The total cost of the project (loan only) is estimated at $18.91 per acre of irrigated land or an annual amortization cost of $1.56 per acre. Title to the irrigable area is held by 35 land owners or an average of 185 acres per owner. Population living on the project is 30 persons. Estimating an average farm unit to consist of 100 acres irrigated, the project will support 120 farm families or 85 new families in addition to the present owners.

TETON COUNTY

CPB (April 28, 1939)

"Our County Agricultural Planning Committee has been studying the possibilities of water development and areas which could be developed if sufficient water were available with the idea of relocating some of our families from submarginal areas, as well as a place for families from other areas.

"Possibilities of relocating stranded farm families:

126 Teton County Cooperative Canal Company

"The Teton County Cooperative Canal Company in the Farmington community. Up until two years ago they had depended entirely upon irrigating from the Teton river with no storage. In the winter of 1936-37 through the aid of the Water Conservation Board they completed the Eureka dam which gives them supplemental storage of 5000 acre feet. The land on the east end of the bench is exceptionally good deep soil, and according to our planning committee is capable of intensified irrigation. With this added water supply, we believe there would be a place for 10 additional family units. The size of the family unit in this area is to be 160 to 200 acres. We believe this land could be purchased for $25 to $40 an acre. All construction costs of water included in the purchase price.

356 Deep Creek

"Our planning board recommended the approval of the supplemental storage on Deep creek with the idea of developing some 10,000 acres of good irrigable land. There is no storage now on Deep creek and these farmers have been depending upon the spring runoff for their limited irrigation A site has been located which will hold approximately 17,000 acre feet of water. It was figured that this project would benefit 17 families. This number did not include the number who would ultimately be on the project if sufficient water were available. We believe there is sufficiently good irrigable land available below the present ditch which could relocate some 25 families on 240 acre units which is recommended for this project. We believe this land could be purchased at $15 per acre.

216 Bynum Irrigation Project

"Bynum Irrigation Project has possibilities for relocating some 15 additional families on a recommended size of family unit of 240 acres for this project. There are approximately 20,000 acres of irrigable land which have quite a few settlers at the present time. This project has been handicapped the past few years because of draining their reservoir in order to fix up the dam and double their storage space. They have now increased their storage to about 90,000 acre feet which gives them adequate storage providing they get a good wet year to fill the dam. Once this dam is filled we believe that there will be sufficient run-off to adequately take care of this project. We believe this land could be purchased for around $20 an acre. We also understand that this project is being refinanced. We are told that the construction costs and the operation and maintenance will be in the neighborhood of $1.25 to $1.35 per year.

(A) and (B) Sun River Irrigation Project

"There is still land to be homesteaded on the Sun River Project. We understand they are opening up for homesteading this year some 81 units on the east edge of the project. These units will vary in size from 80 to 160 acres, depending upon the amount of irrigable land. We also understand there are approximately 150 units which are yet to be opened. Most of this is on the west end of the Sun River Project. If existing laws

could be corrected, which would permit the Farm Security Administration to finance homesteaders, the Sun River Project could accommodate quite a number within the course of the next five years. We understand that the Farm Security and the Reclamation Service are working on a proposition at the present time to make this possible."

FSA

(A) Floweree Project (see also CPB, Teton Land Company, Cascade County)

Water supply from Sun River; gross acreage, [illegible]; net irrigable, 15,000; 150 farm units averaging 2[illegible] acres; type of project, community; type of farming, general stock; present ownership, corporation; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 550,[illegible]	Per unit	$ 3,[illegible]
Construction and development		1,29[illegible]		[illegible],2[illegible]
		$1,[illegible]		$10,25[illegible]

(B) Sun River Project (location unknown

Water supply from Sun River; gross acreage, [illegible]; net irrigable, 24,[illegible]; [illegible] farm units averaging [illegible] acres; type of project, infiltration; type of farming, general; present ownership, public domain; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ nothing	Per unit	$ nothing
Construction and development		2,1[illegible]		[illegible],000
		$2,1[illegible]		$7,000

SWCB

356 Deep Creek Storage Project (PWA Docket [illegible] 1[illegible])

It is proposed to divert water from Deep Creek for storage in a bench reservoir to supply supplemental irrigation to [illegible] acres of land in Deep Creek and Teton River valleys. Total cost of the project (loan only) is estimated at $19.1[illegible] per acre of irrigated land or an annual amortization cost of $1.[illegible] per acre. Title to the irrigable area is held by 16 land owners or an average of 7[illegible]7 acres per owner. Population living on the project is 6[illegible] persons. Estimating an average farm unit to consist of [illegible] acres irrigated, the project will support [illegible] families or [illegible] families in [illegible] land owners.

126 Teton Cooperative Canal Project

This project was built by the State Water Conservation Board to supply supplemental irrigation for [illegible] acres of land. The sponsor's cost amounted to $2.86 per acre. The number of land owners is not known, but it is estimated that the project will support at least [illegible] families, each with 120 acres of irrigated land.

126 Bynum Irrigation District

This project was built as a state irrigation district to

irrigate 18,000 acres of land. Data are not available as to the number of land owners. Resettlement opportunities are outlined above under CPB.

TOOLE AND LIBERTY COUNTIES

SWCB

152 Marias River Project

It is proposed to divert water from Marias river to irrigate lands between Shelby and Havre, scattered through Toole, Liberty, Hill and Chouteau counties. Surveys are being made by the United States Bureau of Reclamation. It is estimated by the Bureau that about 190,000 acres will be irrigated, at a total cost of $35,706,000. When completed, it is estimated that this project will establish homes for at least 2000 families (new families) on 120 irrigable acres each.

TREASURE COUNTY

FSA

144 Big Horn-Tullock Project (T5N R 34 E)

Water supply from Yellowstone river; gross acreage, 2625; net irrigable, 2625; 25 farm units averaging 105 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 52,500	Per unit	$2,100
Construction and development		175,000		7,000
		$227,000		$9,100

274 North Sanders Irrigation Project (T. 7 N., R. 37 E.)

Water supply from Yellowstone river; gross acreage, 2490; net irrigable, 2490; 25 farm units averaging 99.6 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 44,100	Per unit	$1,764
Construction and development		175,000		7,000
		$219,100		$8,764

SWCB

274 North Sanders Irrigation Project (FWA Docket No. Mont. 1056)

It is proposed to build a low diversion dam across Yellowstone river and rehabilitate the present canal system which covers an area of 3500 acres of land, located along the north side of Yellowstone river opposite the town of Sanders. It is also proposed to install a pumping unit to lift water from the canal to a higher level to irrigate an additional 1900 acres, thus making a total of 5400 irrigable acres. The possibilities of resettlement are described above under Farm Security Administration.

144 Big Horn-Tullock Project (FWA Docket No. Mont. 1052)

This project was completed in 1907 and operated successfully until 1922 when the head works were damaged. The 1800 acres of irrigated land under this project are located along the south side of Yellowstone river immediately below the mouth of Big Horn river.

It is now proposed to rehabilitate the present canal and install either a diversion dam across Big Horn river or put in a pumping plant. Also it is proposed to put in an auxiliary pump to irrigate 500 new acres, thus making a total of 2300 acres irrigated.

VALLEY COUNTY

CPB (May 3, 1939)

"Possibilities of relocating stranded farm families: irrigation developments, location, acres and number of economic family units: 22/

(A)	Frazer Indian Irrigation Project	4400 acres	40 families
(B)	Hay Coulee	4 00 acres	20 families
(C)	Northside Milk river, between Tampico and Glasgow	5000 acres	30 families
549	Cherry Creek	2000 acres	15 families

"Chain of Lakes will provide supplemental water to existing areas.

"Estimated price at which land can be purchased: probably from $18 upwards. We believe that migratory and stranded families can be reestablished through Resettlement or Farm Security Administrations by purchasing, leveling, and developing land and selling on long time contract."

SWCB

Only a few projects are listed in the Water Board files in Valley County, but for lack of sufficient data for this report they are not included herein.

WHEATLAND COUNTY

CPB

"Possibilities of relocating stranded farm families:

214 "Upper Musselshell Irrigation Project; number of acres, 8000; number of economic family units, 50.

"Providing supplemental water to existing areas:

22/ Potential opportunities for resettlement on the Milk river extension have been included with Blaine County under FSA. There are insufficient data to estimate cost of other projects listed by CPB.

(A) "Lebo Irrigation Area, Harlowton; 3000 acres; number of economic family units, 18.

"Estimated cost of construction: Upper Musselshell Project, $700,000; Lebo Irrigation area, $80,000; estimated price at which land can be obtained, $15 per acre.

"Wheatland County has possibilities for relocation of farm families particularly in the Upper Musselshell Irrigation area which is now under construction. In the report we show that there will be approximately 8000 acres available for development and location of farm families. The new acreage which will come under irrigation and the acreage for which supplemental water will be added is greater than the 8000 acres, but this is our estimate of the amount of land which will be available for settlement purposes.

"In showing the cost of the Musselshell Project we show a total cost, all of which should not be charged against the acreage shown for settlement purposes. A fairer basis might be the water contract which calls for a payment of $1.10 per acre foot per year.

"In addition to the Musselshell area there is a possibility for supplemental development in the Lebo area south of Harlowton. At the present time there is a storage reservoir which could be quite easily increased in storage capacity. The estimated cost of development on this area is 60,000, and with this development it is estimated that an additional 3000 acres could be put under water, as well as furnishing supplemental water for some acreage which is now irrigated.

SWCB

215 Upper Musselshell Storage Project (FWA Docket No. Mont. 1048-DS)

This project was completed in 1939. Two reservoirs and a distribution canal are to supply supplemental water to 30,000 acres of land in Musselshell valley between Martinsdale and Harlowton. Total cost of the project (loan only) is estimated at $14.23 per acre of irrigated land or an annual amortization cost of $1.10 per acre. Title to the irrigable area is held by 128 land owners or an average of 234 acres per owner. Estimating an average farm unit to consist of 100 acres irrigated, the project will support 300 farm families or 172 new families in addition to the present owners.

WIBAUX COUNTY

SWCB

133 Big Beaver

A combination flood control and irrigation project has been proposed on Big Beaver creek above the town of Wibaux. Preliminary data are very meager, and settlement opportunities are not known at this time.

CPB (May 1, 1939)

"Approximately two-thirds of the farm lands in Yellowstone County are tenant operated, and although 101,000 acres of the 300,000 odd acres in Yellowstone County which are farmable are irrigated, the absentee owned tracts on irrigated land are just as large as on dry land. Weather, crop prices, and insects during the past four or five years have made a large influx of dry land farmers onto irrigated areas, and into the outskirts of Billings, where these folks have tried to obtain a living on a small irrigated farm or on a ten-acre tract, supplementing this farm with relief or WPA work, and other town work.

"With reference to relocating stranded farm families through irrigation development, there are many possibilities in Yellowstone County, none of which appear very soon to be set up. We have one small area on Alkali creek which if dammed would handle eight or ten additional farm families. There has been a government survey run in the Wheat Basin and Broadview areas which, if eventually built, would irrigate over 100,000 acres in Yellowstone county, and which of course would take care of an enormous increase in farmers. This area, however, would not be only in Yellowstone County, but would include Stillwater, Musselshell and Golden Valley counties. In addition, there are many small individual flood irrigation projects which could be carried out that would assist present dry farmers, particularly in the Buffalo creek and Alkali creek grazing districts.

"As to drainage areas, at least 10,000 acres of irrigated land in Yellowstone County are out of production at the present time, due to the insufficient drainage, and the acreage is increasing rapidly every year. This is the most important development which could be carried out in Yellowstone County. Seepy landseast of Billings and west of Laurel, and between Billings and Laurel are taking out many acres of good land each year. Draining these lands would not make an increase in farmers nor would it locate permanently any migratory families, but it would allow farmers who are on these places at the present time, to stay and prevent further removal of farm families from these areas, which is as important as attempting to care for migratory families.

"Unless the large irrigated areas in Wheat Basin and its surrounding areas come under irrigation, I do not believe there is a possibility of many migratory or stranded families to become re-established in Yellowstone County. However, through small dam and reservoir construction and through drainage of present seepy areas, there can be, to a large extent, a lessening of an increase in migratory families from their farms in Yellowstone County."

FSA

135 Victory Project (T. 4 N., R. 34 E.)

Water supply from Bi Horn river; gross acreage, 2260; net

irrigable 2260; 25 farm units averaging 90.4 acres; type of project, infiltration; type of farming, general; present ownership, private; type of development needed, buildings, lands, fencing and irrigation.

Estimated cost of land	Total	$ 45,200	Per unit	$1,808
Construction and development		175,000		7,000
		$220,200		$8,808

(A) Laurel Homestead (location unknown)

Water supply from Yellowstone river; gross acreage, 300; net irrigable, 300; 60 farm units averaging 5 acres; type of project, subsistence; present ownership, private; type of development needed, buildings, lands and irrigation.

Estimated cost of land	Total	$ 19,500	Per unit	$ 325
Construction and development		270,000		4,500
		$289,500		$4,825

SWCB

Only a few projects are listed in the files of the Water Board in Yellowstone County. For the lack of sufficient data these projects have not been included herein.

PRELIMINARY SUMMARY OF POTENTIAL OPPORTUNITIES IN MONTANA FOR MIGRATORY AND STRANDED FAMILIES

The projects are listed in the same order as in the text, to which reference is made for explanation of numbers and letters used in connection with the project names and for abbreviations of the agencies proposing the projects. All projects mentioned in the text are listed but where data is insufficient there is no distribution in the table.

Types of farming listed in column 4 are abbreviated as follows: Crp., crop farming; Stk., stock raising; and Sub., subsistence homesteads.

Column 5 shows total irrigable acres in the project when known. On projects proposed by FSA the figures show only the irrigable acres proposed for resettlement. Column 6 shows the actual number of present land owners when known.

LEGEND * in column 1 indicates the project is believed ready for immediate settlement, the main water supply such as reservoirs, dams, pumps and main canals having been completed.
* in column 12 indicates the cost of main water supply has been included in column 13.
** in column 12 indicates the main water supply costs have been financed and the settler is to pay the amortized yearly charge.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
						New Units				Cost per Unit in Dollars			
COUNTY AND PROJECT	Migratory and Stranded Farm Families	Proposed by	Type of Farming	Total Irrigable Acres in Project	Present Land Owners	Number	Average Acres: Irrigable	Average Acres: Pasture	Total	Land	Water	Building and Development	Total
BEAVERHEAD	0												
(A) Carter Land Co.		FSA	Crp.	1,200		15	80	5	85	2,667	*	7,200	9,867
263 Big Sheep Cr.		SWCD	Stk.	4,340	9	34	100	40	140	4,200	1,728	5,850	11,778
297 Clark Lake		SWCB	Stk.	4,500	14	31	100	40	140	4,200	1,335	5,850	11,385
10 Medicine Lodge		SWCB	Stk.	2,400	9	15	100	40	140	4,200	1,583	5,850	11,633
226 Beaverhead Rock		SWCB	Stk.	68,000	446	234	100	100	200	4,000	913	6,400	11,313
BIG HORN	150												
165 Lodge Grass		CPB											
(A) Heinrich Estate		FSA	Crp.	2,469		30	82	19	101	2,643	*	6,200	8,743
12 Big Horn Dam		SWCB	Crp.	61,000		150	80		80	600	2,707	6,700	9,207
BLAINE	125												
(A) East of Herlem		CPB	Crp.	8,000		100	80		80	560	2,000	6,700	8,260
(B) West of Lonman		CPB											
(C) Milk R. Extension *		FSA	Crp.	104,000		1,300	80	15	95	1,738	*	7,000	8,738
175 Clear Cr. Storage		SWCB	Stk.	2,500	10	21	80	200	280	3,000	2,436	6,375	11,800
BROADWATER	50												
21 Broadwater-Missouri *		SWCB	Crp.	21,000	200	63	80	80	160	3,400	**	5,850	9,250
CARBON	50												
(A) Red Lodge Homestead *		FSA	Sub.	650		55	12	2	14	250	*	5,500	5,750
(B) Bear Creek Homestead *		FSA	Sub.	140		28	5	5	10	285	*	4,500	4,785
(C) Red Lodge-Rosebud *		FSA	Crp.	3,000		25	120	80	200	3,000	*	7,200	10,200
(D) Fromberg-Rock Creek Homestead*		FSA	Sub.	230		46	5		5	375	*	4,000	4,375
(E) Bear Creek Homestead *		FSA	Sub.	140		23	5		5	300	*	4,000	4,300
64 Red Lodge-Rock Creek *		SWCB	Sub.	31,584	432	8	10		10	750	**	3,500	4,250
64 Red Lodge-Rock Creek *		SWCB	Sub.			16	5		5	375	**	3,500	3,875
CARTER	247												
150 Little Missouri River		SWCB	Stk.	30,000	100	150	120	200	320	3,500	2,092	6,000	11,592
153 Box Elder Creek		SWCB	Stk.	2,000	8	9	120	200	320	1,100	3,210	6,000	10,310
CASCADE	100												
242 Benton Lake		CPB				165							
(A) Great Falls-Vaughn Division		CPB				62							
(B) Ft. Shaw Division		CPB	Stk.	11,500		20	75	250	325	3,750	*	5,975	9,725
267 Chesnut Valley *		FSA	Crp.	4,400		55	80		80	1,363	*	8,000	9,363
(C) Byrn-O'Neal Lbr. Co.		FSA	Crp.	6,000		100	60	14	74	744	*	7,200	7,944
607 Dearborn-Crown Butte		SWCB	Crp.	20,000	30	137	120		120	1,200	4,346	5,770	11,366
CHOUTEAU	350												
152 Marias River (See Toole Co.)		CPB											
CUSTER	145												
(A) S. H. Ranch		FSA	Stk.	1,440		20	72	1,791	1,863	4,864	*	6,600	11,464
326 Pennell Creek		FSA	Crp.	500		5	100		100	1,012	*	5,000	6,012
(B) Miles City Ranch Co.		FSA	Stk.	350		5	70	164	234	3,000	*	7,000	10,000
(C) Wertheimer Land		FSA	Crp.	300		5	60	35	95	6,000	*	7,000	13,000
293 Sadie's Flat		FSA	Crp.	6,200		75	82		82	826	*	8,400	9,226
29 Tongue River Storage *		SWCB	Stk.	35,000	120	317	80	160	240	4,400	**	5,740	10,140
286 Lower Pumpkin Creek		SWCB	Stk.	9,500		30	120	200	320	2,400	2,725	5,975	11,100
DANIELS	305												
39 Richland Flood Control		SWCB	Stk.	7,971	34	45	100	160	260	1,900	2,473	5,975	10,348
DAWSON	200												
(A) Buffalo Rapids Unit No. 1*		CPB	Crp.	17,000		100	80		80	800	3,440	5,700	9,940
DEER LODGE	40												
FALLON	162												
538 Little Beaver Creek		SWCB	Stk.	6,000	10	65	80	320	400	1,040	2,571	6,110	9,721
FERGUS	225												
(A) Judith Basin		FSA	Crp.	4,254		35	121		121	2,431	*	7,200	9,631
482 Lewiston Ditch		SWCB											
587 Ross Fork		SWCB	Crp.	8,000	46	20	120		120	3,000	1,736	5,770	10,506
503 Cottonwood		SWCB	Crp.	3,000	30	7	80	80	160	2,800	2,789	5,840	11,429

1	2	3	4	5	6	7	8	9	10	11	12	13	14
						New Units				Cost per Unit in Dollars			
						Avarage Acres							
COUNTY AND PROJECT	Migratory and Stranded Farm Families	Proposed by	Type of Farming	Total Irrigable Acres in Project	Present Land Owners	Number	Irrigable	Pasture	Total	Land	Water	Building and Development	Total
FLATHEAD	1,150												
45 Hungry Horse		CPB											
(A) Ashley Lake		CPB	Sub.	1,000		20	50		50	2,500	1,500	3,670	7,670
(B) Cut Over Lands		CPB	Sub.	15,000		200	75		75	750	1,875	3,700	6,325
(C) Abandoned Farms		CPB				50							
217 Talley Lake		SWCB	Crp.	10,000	90	35	80		80	2,400	2,640	5,700	10,740
GALLATIN	15												
(A) Manhattan Co.		FSA	Crp.	3,600		30	120		120	3,333	*	7,000	10,333
410 South Bench		WCB	Crp.	7,500	45	49	80		80	800	2,987	5,700	9,487
GARFIELD	180												
278 Wacon Flats *		SWCB	Stk.	2,000		5	100	300	400	1,000	**	6,100	7,100
GLACIER	21												
(A) North of Cut Bank		CPB											
GOLDEN VALLEY	10												
Listed with Musselshell Co.													
GRANITE	6												
210 Flint Creek *		SWCB	Crp.	25,000	120	76	100		100	5,500	**	5,770	11,270
210 Flint Creek *		SWCB	Stk.			12	200		200	6,000	**	5,810	11,810
HILL	350												
55 Beaver Creek		CPB	Sub.	3,300	21	61	40		40	2,400	1,230	3,635	7,265
152 Marias River		CPB				1,250							
(A) East part of County		CPB				60							
JEFFERSON	50												
65 Upper Boulder		SWCB	Stk.	6,600	28	38	100	100	200	2,800	1,667	5,700	10,367
68 Whiteteil		SWCB	Stk.	4,000	24	9	120	200	320	2,400	2,150	6,000	10,560
221 Pipestone Bench *		SWCB	Stk.	2,500		5	120	200	320	3,000	390	6,000	9,390
283 Jefferson R. Diversion		SWCB	Stk.	11,000	85	7	120	200	320	3,600	1,160	6,000	10,760
JUDITH BASIN	50												
277 Ackley Lake *		SWCB	Stk.	5,000	33	17	100	40	140	3,120	**	5,800	8,920
525 Pig Eye Basin		SWCB	Stk.	7,000	30	57	80	40	120	2,300	2,707	5,780	10,787
LAKE	450												
(A) Polson Pumping		CPB											
(B) West Polson		FSA	Crp.	1,800		23	78	29	107	2,140	*	8,000	10,140
(C) Miscellaneous						77							
LEWIS AND CLARK	100												
(A) Colline Land Co.		FSA	Stk.	3,600		60	60	139	199	2,833	*	7,000	9,833
73 Nilan Reservoir		SWCB	Crp.	10,000	40	85	80	320	400	3,360	1,152	5,950	10,462
LIBERTY													
152 Marias River (See Toole Co.)		SWCB											
LINCOLN	30												
586 Glen Lake		SWCB											
MADISON	15												
(A) Parrott Ranch *		FSA	Stk.	1,020		15	68	44	112	3,000	*	7,000	10,000
78 Ruby River *		SWCB	Crp.	30,000	199	101	100		100	5,000	**	5,800	10,800
540 Ruby River East Side Canal		SWCB	Crp.	11,650	90	26	100		100	2,500	1,013	5,800	9,313
McCONE	100												
MEAGHER	40												
617 Dorsey		CPB											
82 North Fork Smith River *		SWCB	Stk.	11,000	30	80	100	220	320	3,660	**	5,975	9,635
536 South Side Canal *		SWCB	Stk.	2,000		8	100	220	320	3,860	**	5,975	9,835
M MINERAL	10												
MISSOULA	90												
605 Missoula Valley		SWCB	Sub.	12,000	350	250	20		20	1,500	642	3,600	5,742
MUSSELSHELL	3												
(A) Wolfolk Ranch		FSA	Stk.	1,500		15	100	567	667	4,333	*	7,200	11,533
(B) Musselshell Homestead		FSA	Sub.	350		70	5	30	35	643	*	5,571	6,214
92 Dead Man's Basin		SWCB	Stk.	20,000		50	100	320	420	2,600	2,400	5,900	10,900
608 Newton Ditch		SWCB	Crp.	3,000	30	7	80		80	2,400	1,920	5,700	10,020
PARK	200												
(A) Rosedale-Elbow		CPB				5							
(B) Elk Creek		CPB				1							
(C) Porcupine Creek		CPB				3							
(D) Lat Dam		CPB				20							
(E) Antelope Res.		CPB				30							
95 Potter Basin Res.		CPB				50							
(F) Wilsall Dam		CPB				50							
(G) Small Wilsall Dam		CPB				5							
(H) Kietner and Hardy Dam		CPB				5							
(I) Muddy Reservoir		CPB				1							
(J) D'Ewart Reservoir		CPB											
95 Shields River		FSA	Stk.	4,000		30	133	400	533	3,000	*	7,200	10,200
432 Mission Ranch		FSA	Stk.	1,500		15	100	100	200	2,667	*	7,200	9,867
(K) Spring Creek		FSA	Stk.	688		10	69	56	125	3,800	*	7,200	11,000
225 Park Branch Canal *		SWCB	Crp.	10,000	26	99	80		80	2,800	**	5,700	8,500
233 Livingston Ditch *		SWCB	Sub.	3,000	77	73	20		20	1,500	**	3,600	5,100
140 Mill Creek		SWCB	Crp.	4,000	38	12	80		80	2,000	1,947	5,700	9,647

1	2	3	4	5	6	7	8	9	10	11	12	13	14
COUNTY AND PROJECT	Migratory and Stranded Farm Families	Proposed by	Type of Farming	Total Irrigable Acres in Project	Present Land Owners	New Units	Average Acres			Cost per Unit in Dollars			
						Number	Irrigable	Pasture	Total	Land	Water	Building and Development	Total
PETROLEUM	11												
43 Velentine *		SWCB	Stk.	1,000		3	120	880	1,000	2,600	**	6,300	8,900
98 Winnett *		SWCB	Stk.	4,000	36	4	100	900	1,000	3,440	**	6,300	9,740
166 Yellow Water *		SWCB	Stk.	2,500	10	11	120	880	1,000	2,480	**	6,300	8,780
97 Flatwillow		SWCB	Stk.	10,000	48	35	120	880	1,000	2,960	2,400	6,300	11,660
PHILLIPS	700												
542 Seco Divide		CPB	Crp.	3,000	22	68	100		100	2,800	3,000	5,770	11,570
(A) Phillips		CPB			17	53							
102 Sun Prairie		CPB			6	19							
(B) Matador		CPB			5	15							
(C) North Dodson		CPB			4	13							
(D) Nelson North Canal		CPB			11	27							
101 Beaver Creek		FSA	Stk.	11,044		67	165	99	264	4,610	*	7,765	12,375
PONDERA	35												
(A) Valier *		FSA	Crp.	12,000		100	120		120	2,700	*	7,000	9,700
POWDER RIVER	28												
POWELL	14												
132 Nevada Creek *		SWCB	Stk.	10,000	30	53	120	240	360	3,720	**	5,850	9,570
105 Race Track Creek		SWCB	Crp.	6,000	40	35	80		80	2,280	1,180	5,700	9,160
411 Little Blackfoot Cottonwood		SWCB	Crp.	3,000	27	23	60		60	2,100	2,600	5,670	10,430
PRAIRIE	100												
(A) Buffalo Rapids Unit No. 1 *		CPB	Crp.	976		12	81		81	800	3,400	5,700	10,010
(B) Buffalo Rapids Unit No. 2		CPB	Crp.	16,000		200	80		80	500	3,200	5,700	9,700
RAVALLI	175												
(A) Bitterroot Stock Farm *		FSA	Crp.	5,000		100	56	4	60	2,400	*	7,200	9,600
257 West Fork Bitterroot River *		SWCB	Crp.	32,000		10	80		80	4,000	**	5,700	11,700
115 Bear Creek		SWCB	Crp.	2,530	31	11	60		60	2,400	1,612	5,675	9,687
110 Pledgett Creek		SWCB	Crp.	5,000	65	18	60		60	3,000	2,856	5,675	11,531
606 Florence Irrigation		SWCB	Crp.	6,500		10	60		60	2,400	610	5,675	8,685
RICHLAND	575												
(A) East Sidney		FSA	Stk.	2,000		20	100	162	262	2,375	*	7,000	9,375
(B) East Sidney		FSA	Crp.	3,000		50	60	20	80	800	*	8,200	9,000
206 Savage		FSA	Crp.	2,000		25	80		80	800	*	8,200	9,000
(C) Sidney Homestead *		FSA	Sub.	160		20	8		8	480	*	4,200	4,680
207 Sidney Pumping *		SWCB	Crp.	5,300	15	51	80		80	2,000	**	5,700	7,700
246 Missouri River Pumping		SWCS	Crp.	20,000	33	217	80		80	800	3,200	5,700	9,700
ROOSEVELT	325												
(A) Roosevelt County		FSA	Stk.	4,000		25	160	840	1,000	2,440	*	7,200	9,640
(B) Hog Ranch		FSA	Crp.	2,000		40	50	25	75	1,200	*	7,000	8,200
400 Missouri River Pumping		SWCB	Crp.	55,370	84	604	80		80	800	3,200	5,700	9,700
117 Bainville		SWCB	Stk.	10,746	50	57	100	380	480	2,140	1,303	6,110	9,553
226 Lower Big Muddy		SWCB	Stk.	1,579		3	160	320	480	2,720	1,824	6,110	10,654
ROSEBUD	140												
(A) Horton Ranch		FSA	Stk.	1,500		12	125	875	1,000	2,750	*	7,000	9,750
248 Rosebud River		SWCB											
SANDERS	250												
119 Trout (Swamp) Creek *		FSA	Crp.	3,500		50	70		70	2,000	*	7,200	9,200
SHERIDAN	500												
269 Upper Big Muddy		SWCB											
SILVER BOW	30												
251 Brown's Gulch		SWCB	Sub.	3,500	10	156	20		20	1,500	900	3,600	6,000
STILLWATER	50												
121 Columbus *		FSA	Crp.	1,600		20	80		80	800	*	7,800	8,600
(A) Absarokee Homestead		FSA	Sub.	225		25	9		9	480	*	4,500	4,980
SWEET GRASS	165												
(A) Glass-Lindsay		CPB											
(B) Boulder River		CPB											
(C) Big Timber *		FSA	Stk.	10,000		100	100	120	220	2,200	*	7,000	9,200
(D) Big Timber Homestead *		FSA	Sub.	200		40	5		5	300	*	4,500	4,800
124 Sweet Grass Storage		SWCB	Stk.	12,000	35	85	100	160	260	3,060	1,871	5,725	10,876
TETON	12												
216 Bynum *		CPB	Stk.	18,000		15	240		240	4,800	**	5,500	10,300
(A) Floweree *		FSA	Stk.	15,000		180	83	123	206	3,055	*	7,200	10,255
(B) Sun River *		FSA	Crp.	24,000		300	80		80		*	7,000	7,000
350 Deep Creek		SWCB	Crp.	12,000	16	84	120	120	240	3,600	2,389	5,840	11,829
126 Teton Co-Operative *		SWCB	Crp.	4,000		15	120	40	160	3,600	**	5,840	9,440
TOOLE	41												
152 Marias River		SWCB				750							
TREASURE	30												
144 Big Horn-Tullock		FSA	Crp.	2,625		25	105		105	2,100	*	7,000	9,100
274 North Sanders		FSA	Crp.	2,490		25	100		100	1,764	*	7,000	8,764
VALLEY	650												
(A) Fraser Indian Irrigation		CPB				40							
(B) Hay Coulee		CPB				20							
(C) Northside Milk River		CPB				30							
543 Cherry Creek		CPB				15							

1	2	3	4	5	6	7	8	9	10	11	12	13	14
						New Units				Cost per Unit in Dollars			
						Average Acres							
COUNTY AND PROJECT	Migratory and Stranded Farm Families	Proposed by	Type of Farming	Total Irrigable Acres in Project	Present Land Owners	Number	Irrigable	Pasture	Total	Land	Water	Building and Development	Total
WHEATLAND	50												
(A) Lebo Irrigation		CPB	Crp.	3,000		18	167		167	2,500	3,333	5,850	11,683
214 Upper Musselshell *		SWCB	Stk.	30,000	128	172	100	200	300	3,200	**	6,100	9,300
WIBAUX	140												
133 Big Beaver		SWCP											
YELLOWSTONE	300												
135 Victory		FSA	Crp.	2,260		25	90		90	1,808	*	7,000	8,808
(A) Laurel Homestead		FSA	Sub.	300		60	5		5	325	*	4,500	4,825
TOTAL	9,394												

RECAPITULATION

TYPE OF FARMING	NO. OF UNITS	AVERAGE ACRES IRRIGABLE	AVERAGE ACRES PASTURE	AVERAGE ACRES TOTAL	AVERAGE TOTAL
CROP AVAILABLE	2,462	82	11	93	$ 8,849
POTENTIAL	2,340	84	14	98	9,673
ALL	4,802	83	12	95	9,251
STOCK AVAILABLE	1,032	95	171	266	9,802
POTENTIAL	1,338	106	230	336	11,030
ALL	2,370	101	204	305	10,467
SUBSISTENCE					
AVAILABLE	314	10	1	11	4,859
POTENTIAL	842	32	3	35	6,036
ALL	1,156	26	2	28	5,616
UNCLASSIFIED	2,818				9,653

ALL TYPES	NO. OF UNITS	TOTAL ACRES IRRIGABLE	TOTAL ACRES PASTURE	TOTAL ACRES TOTAL	TOTAL COSTS
AVAILABLE	3,808	303,676	203,285	506,961	$ 33,428,510
POTENTIAL	4,520	364,595	342,666	707,161	42,410,197
TOTAL CLASSIFIED	8,328	668,271	545,951	1,214,122	75,838,707
UNCLASSIFIED	2,818				27,202,154
GRAND TOTAL	11,146				$103,040,861

Note: The unclassified units will include only crop farming and stock raising units. Therefore, the total cost of the 2818 unclassified units was computed from the state averages for both crop and stock farming.

APPENDIX

TABLE I.

Population Changes in Montana, by Counties, 1920 to 1930

County	Births 1921 to 1930	Deaths 1921 to 1930	No. of births over deaths	Tot. Census population 1920	Tot. census population 1930	1930 population without migration	Net decr. or incr. by migration	Pct. decr. or incr. due to migration is of 1920 census nos.
Beaverhead	896	660	236	7,369	6,654	7,605	-951	-12.9
Big Horn	2,017	901	1,116	7,015	8,543	8,131	+412	+ 5.9
Blaine	1,864	717	1,147	9,057	9,006	10,204	-1,198	-13.2
Broadwater	412	226	186	3,239	2,738	3,425	-687	-21.2
Carbon	2,684	984	1,700	15,279	12,571	16,979	-4,408	-28.9
Carter	593	201	392	3,972	4,136	4,364	-228	- 5.7
Cascade	8,619	3,848	4,771	36,827	41,146	41,598	-452	- 1.2
Chouteau	1,165	539	626	11,051	8,635	11,677	-3,042	-27.5
Custer	2,535	1,216	1,319	12,194	11,242	13,513	-2,271	-18.6
Daniels	1,364	345	1,019	6,676	5,553	7,695	-2,142	-32.1
Dawson	2,188	877	1,311	9,239	9,881	10,550	-669	- 7.2
Deer Lodge	2,466	3,419	953Ø	15,323	16,293	14,370	+1,923	+12.5
Fallon	1,052	256	796	4,548	4,568	5,344	-776	-17.1
Fergus	3,876	1,551	2,325	21,212	16,531	23,537	-7,006	-33.0
Flathead	3,970	1,990	1,980	15,316	19,200	17,296	+1,904	+12.4
Gallatin	3,309	1,467	1,842	15,864	16,150	17,706	-1,556	- 9.8
Garfield	598	179	419	5,368	4,252	5,787	-1,535	-28.6
Glacier	1,290	740	550	4,178	5,297	4,728	+569	+13.6
Golden Valley	428	148	280	3,222*	2,126	3,502	-1,945	-60.4
Granite	299	315	16Ø	4,167	3,013	4,151	-1,138	-27.3
Hill	3,150	1,236	1,914	13,958	13,775	15,872	-2,097	-15.0
Jefferson	400	414	14Ø	5,203	4,133	5,189	-1,056	-20.3
Judith Basin	515	206	309	5,740*	5,238	6,049	-811	-14.1
Lake	1,414	686	728	10,649*	9,541	11,377	-1,836	-17.2
Lewis & Clark	3,331	2,481	850	18,660	18,224	19,510	-1,286	- 6.9
Liberty	315	122	193	2,416	2,198	2,609	-411	-17.0
Lincoln	1,354	519	835	7,797	7,089	8,632	-1,543	-19.8
Madison	765	508	257	4,747	6,323	5,004	+1,319	+27.8
McCone	752	215	537	7,495	4,790	8,032	-3,242	-43.2
Meagher	232	172	60	2,622	2,272	2,682	-410	-15.6
Mineral	194	175	19	2,327	1,626	2,346	-720	- 30.9
Missoula	4,674	2,892	1,782	19,781	21,782	21,563	+219	+ 1.1
Musselshell	1,751	663	1,088	9,130	7,242	10,218	-2,976	-32.6
Park	2,126	1,143	983	11,330	10,948	12,313	-1,365	-12.0
Petroleum	223	67	156	3,401*	2,045	3,557	-1,512	-44.4
Phillips	1,515	456	1,059	9,311	8,208	10,370	-2,162	-23.2
Pondera	1,579	534	1,045	5,741	6,964	6,786	+178	+ 3.1
Powder River	474	140	334	3,357	3,909	3,691	+218	+ 6.5
Powell	877	558	319	6,909	6,202	7,228	-1,026	-14.8
Prairie	842	245	597	3,684	3,941	4,281	-340	- 9.2
Ravalli	1,765	962	803	10,098	10,315	10,901	-586	- 5.8
Richland	1,866	547	1,319	8,989	9,633	10,308	-675	- 7.5
Roosevelt	2,872	878	1,994	10,347	10,672	12,341	-1,669	-16.1
Rosebud	1,490	803	687	8,002	7,347	8,689	-1,342	-16.8
Sanders	624	449	175	4,903	5,692	5,078	+614	+12.5
Sheridan	1,881	526	1,355	8,172	9,869	9,527	+342	+ 4.2
Silver Bow	8,909	8,593	316	60,313	56,969	60,629	-3,660	- 6.1
Stillwater	1,396	475	921	7,630	6,253	8,551	-2,298	-30.1
Sweetgrass	877	346	531	4,604	3,944	5,135	-1,191	-25.9
Teton	782	417	365	5,870	6,068	6,235	-167	- 2.8
Toole	818	380	438	3,724	6,714	4,162	+2,552	+68.5
Treasure	364	112	252	1,990	1,661	2,242	-581	-29.2
Valley	2,531	701	1,830	10,541	11,181	12,371	-1,190	-11.3
Wheatland	914	297	617	5,619	3,751	6,236	-2,485	-44.2
Wibaux	470	147	323	3,113	2,767	3,436	-669	-21.5
Yellowstone	6,591	3,103	3,488	29,600	30,785	33,088	-2,303	- 7.8
STATE TOTALS	102,258	52,747	49,511	548,889	537,606	598,400	-60,794	-11.1

+ Indicates increase.
- Indicates decrease.
* County not organized in 1920, census numbers prorated from parent county or counties on basis of 1930 census numbers
Ø Deaths over births.
Source: Births and deaths data compiled from Bureau of Vital Statistics, State Board of Health.
Population data from 1920 and 1930 Census.

APPENDIX

Table II

Changes in Montana's Population Under 21 Years Old
From 1930 to 1938

County	1930 School Census	No. of Children 13 - 20 Years Old (1930)	Births over Deaths-Under 21 Years Old 1921 - 1938	Population Under 21 Without Migration, 1938	1938 School Census Under 21 years Old	Increase or Decrease Due to Migration	Per cent Change Due to Migration
Beaverhead	2043	867	658	1834	1954	+ 120	+ 5.9
Big Horn	3803	1341	1354	3816	5000	+1184	+31.1
Blaine	3409	1303	1607	3713	4309	+ 596	+17.5
Broadwater	1022	383	283	922	971	+ 49	+ 4.8
Carbon	5483	2255	1542	4770	4643	- 127	- 2.3
Carter	1765	668	425	1522	1310	- 212	-20.1
Cascade	15059	6143	6054	14965	13781	-1184	- 7.9
Chouteau	3475	1308	623	2790	2663	- 127	- 3.7
Custer	4364	1775	1760	4349	3735	- 614	-14.1
Daniels	2698	925	822	2595	1991	- 604	-22.4
Dawson	4192	1569	1407	4030	3405	- 625	-14.9
Deer Lodge	5944	2290	1388	5042	4573	- 469	- 7.9
Fallon	2238	805	632	2065	1737	- 328	-14.7
Fergus	6574	2538	2032	6068	5235	- 833	-12.7
Flathead	7932	2846	3008	8094	9242	+1148	+14.5
Gallatin	6701	2573	2238	6366	6569	+ 203	+ 3.0
Garfield	1851	661	390	1580	1129	- 451	-24.4
Glacier	2707	783	1198	3122	4006	+ 884	+32.7
Golden Valley	976	317	88	747	601	- 146	-15.0
Granite	1038	415	151	774	1125	+ 351	+33.8
Hill	5671	2071	2481	6081	5238	- 843	-14.9
Jefferson	1359	764	277	872	1410	+ 538	+39.6
Judith Basin	2157	813	150	1494	1378	- 116	- 5.4
Lake	4675	1486	1792	4981	6260	+1279	+27.4
Lewis and Clark	6141	2438	2836	6539	6654	+ 115	+ 1.9
Liberty	962	365	161	758	875	+ 117	+12.2
Lincoln	2744	1032	877	2589	3025	+ 436	+15.9
Madison	2217	921	558	1854	2347	+ 493	+22.2
McCone	2219	694	372	1897	1731	- 166	- 7.5
Meagher	735	284	166	617	734	+ 117	+15.9
Mineral	592	227	114	479	647	+ 168	+28.4
Missoula	7784	3237	3483	8035	9235	+1200	+15.4
Musselshell	3168	1235	588	2521	2225	- 296	- 9.3
Park	3818	1500	1294	3612	3919	+ 307	+ 8.0
Petroleum	826	286	89	629	416	- 213	-25.8
Phillips	3356	1279	965	3042	3123	+ 81	+ 2.4
Pondera	2777	1066	1090	2801	2837	+ 36	+ 1.3
Powder River	1707	512	283	1478	1270	- 208	-12.2
Powell	1942	718	506	1730	1761	+ 31	+ 1.6
Prairie	1746	682	406	1470	1043	- 427	-24.5
Revalli	4180	1701	1303	3782	5023	+1241	+29.7
Richland	4660	1701	1651	4610	4428	- 182	- 3.9
Roosevelt	5479	1752	2094	5821	4657	-1164	-21.2
Rosebud	3038	1105	873	2806	2982	+ 176	+ 5.8
Sanders	1907	792	475	1590	2636	+1046	+54.9
Sheridan	4554	1727	1052	3879	3471	- 408	- 9.0
Silver Bow	18463	8090	5643	16016	18011	+1995	+10.8
Stillwater	2706	1010	668	2364	2258	- 106	- 3.9
Sweet Grass	1552	606	521	1467	1359	- 108	- 7.0
Teton	2513	955	470	2028	2706	+ 678	+27.0
Toole	2476	845	725	2356	2336	- 20	- 0.8
Treasure	784	257	176	703	684	- 19	- 2.4
Valley	5184	1758	3031	6457	6374	- 83	- 1.6
Wheatland	1535	554	474	1455	1288	- 167	-10.9
Wibaux	1424	503	309	1230	972	- 258	-18.1
Yellowstone	12897	4842	5488	13543	15798	+2255	+17.5
STATE TOTALS	213222	81578	71106	202750	209090	+6340	+ 3.0

\+ Indicates increase
\- Indicates decrease

APPENDIX TABLE III

NUMBER OF REGISTERED UNEMPLOYED IN MONTANA COUNTIES DEC. 31, 1938,
IN PER CENT OF THE NUMBER OF GAINFUL WORKERS, 1930

	Gainful workers 10 yrs. old and over (1930) 1/	No. registered unemployed 2/ (Dec. 31, 1938)	No. unemployed in per cent of gainful workers
[illegible]ad	3318	659	19.86
[illegible]n	2859	287	10.04
[illegible]	3423	191	5.58
Broadwater	1131	149	13.17
Carbon	4549	940	20.66
Carter	1622	144	8.88
Cascade	17628	1964	11.14
Chouteau	3442	282	8.19
Custer	4918	727	14.78
Daniels	2000	161	8.05
Dawson	3851	391	10.15
Deer Lodge	6166	2208	35.81
Fallon	1664	224	13.46
Fergus	6375	1130	17.73
Flathead	7441	1302	17.50
Gallatin	6092	361	5.93
Garfield	1700	436	25.65
Glacier	1905	457	23.99
Golden Valley	775	252	32.52
Granite	1380	403	29.20
Hill	5475	589	10.76
Jefferson	1692	380	22.46
Judith Basin	2161	367	16.98
Lake	3276	583	17.80
Lewis and Clark	7993	520	6.51
Liberty	905	69	7.62
Lincoln	2976	268	9.01
Madison	2703	342	12.65
McCone	1700	298	17.53
Meagher	1123	158	14.07
Mineral	728	194	26.64
Missoula	9203	877	9.53
Musselshell	2669	410	15.36
Park	4459	271	6.08
Petroleum	848	257	30.31
Phillips	3272	98	2.99
Pondera	2695	187	6.94
Powder River	1575	422	26.79
Powell	2778	546	19.65
Prairie	1631	414	25.38
Ravalli	3881	654	16.85
Richland	3460	260	7.51
Roosevelt	3818	150	3.93
Rosebud	2825	390	13.81
Sanders	2449	308	12.58
Sheridan	3429	105	3.06
Silver Bow	25474	7280	28.58
Stillwater	2272	461	20.29
Sweet Grass	1694	113	6.67
Teton	2389	279	11.68
Toole	2975	131	4.40
Treasure	566	74	13.07
Valley	4189	287	6.85
Wheatland	1472	249	16.92
Wibaux	1054	135	12.81
Yellowstone	12386	2386	19.26
STATE TOTAL	216,434	33,180	15.33

1/ From Census of Unemployment, 1930 2/ From Montana State Employment Service

APPENDIX TABLE IV.--PROPORTION OF STRANDED AND MIGRATORY FARM FAMILIES TO TOTAL FARM OPERATORS BY COUNTIES

County	Total stranded and migratory Total	No. farm operators 1935 Census	Pct. stranded and migratory families are of total farm operators
Beaverhead	0	551	.0
Big Horn	150	1,163	12.9
Blaine	125	1,401	8.9
Broadwater	50	337	14.8
Carbon	50	1,216	4.1
Carter	247	909	27.2
Cascade	100	1,478	6.8
Chouteau	350	1,690	20.7
Custer	145	750	19.3
Daniels	305	904	33.7
Dawson	200	1,017	19.7
Deer Lodge	40	177	22.6
Fallon	162	694	23.4
Fergus	225	1,999	11.3
Flathead	1,150	1,489	77.2
Gallatin	15	1,381	1.1
Garfield	180	1,062	16.9
Glacier	21	668	3.1
Golden Valley	10	348	2.9
Granite	6	247	2.4
Hill	350	1,525	23.0
Jefferson	50	467	10.7
Judith Basin	50	742	6.7
Lake	450	1,696	26.5
Lewis and Clark	100	634	15.8
Liberty	50	467	10.7
Lincoln	30	734	4.1
Madison	15	783	1.9
McCone	100	946	10.6
Meagher	40	305	13.1
Mineral	10	127	7.9
Missoula	90	876	10.3
Musselshell	3	453	.7
Park	200	699	28.6
Petroleum	11	373	2.9
Phillips	700	1,522	46.0
Pondera	35	1,020	3.4
Powder River	28	945	3.0
Powell	14	375	3.7
Prairie	100	539	18.6
Ravalli	175	1,477	11.8
Richland	579	1,506	38.5
Roosevelt	325	1,416	23.0
Rosebud	140	1,080	13.0
Sanders	250	847	29.5
Sheridan	500	1,496	33.4
Silver Bow	30	192	15.6
Stillwater	50	947	5.3
Sweet Grass	165	535	30.8
Teton	12	1,072	1.1
Toole	41	635	6.5
Treasure	30	256	11.7
Valley	650	1,706	38.1
Wheatland	50	297	16.8
Wibaux	140	468	30.0
Yellowstone	300	1,925	15.6
STATE TOTALS	9,394	50,564	18.6

APPENDIX TABLE V.

County Poor Fund and State Public Welfare Expenditures for Direct Relief; W.P.A., C.W.A., F.E.R.A. and Montana Relief Commission Expenditures; P.W.A. Grants and Farm Security Administration Grants, July 1, 1932 to June 30, 1939

	County 1932-1937 a/	County and State 1938 and 1939 b/	W.P.A. c/	C. W. A. d/	F. E. R. A. and M. R. C. e/	P. W. A. Grants f/	F. S. A. Grants g/	Total Expenditures	Population (1930)	Per Capita Expenditures
Beaverhead	$ 69,742	$ 36,136	$ 523,101	$ 31,033	$ 157,893	$ 226,569	$ 2,849	$ 1,047,323	6,654	$ 157.40
Big Horn	62,621	21,473	597,695	46,607	173,227	318,776	388,890	1,609,289	8,543	188.38
Blaine	49,240	17,478	388,745	32,842	134,306	114,105	517,095	1,253,811	9,006	139.22
Broadwater	35,414	15,128	150,262	16,555	47,017	421,712	14,245	700,333	2,738	255.79
Carbon	109,945	52,199	1,103,633	237,504	489,892	112,792	310,542	2,416,507	12,571	192.23
Carter	49,935	6,611	333,338	28,849	155,394	35,342	717,950	1,327,419	4,136	320.94
Cascade	668,396	397,875	3,193,994	347,950	1,499,101	765,759	306,268	7,179,343	41,146	174.48
Chouteau	142,507	40,147	667,528	39,518	88,089	116,857	445,870	1,539,716	8,635	178.31
Custer	122,970	50,874	1,513,910	311,474	649,691	106,314	88,319	2,843,552	11,242	252.94
Daniels	38,382	10,854	788,319	60,687	335,636	14,727	955,842	2,204,447	5,553	396.98
Dawson	56,954	36,628	624,619	74,849	318,667	5,770	303,419	1,420,906	9,881	143.80
Deer Lodge	95,660	158,168	1,967,338	289,705	1,189,790	218,457	5,698	3,924,816	16,293	240.89
Fallon	31,064	11,334	350,484	26,516	153,025	14,768	444,445	1,031,636	4,568	225.84
Fergus	272,125	71,564	1,256,140	86,841	310,209	110,545	960,116	3,067,540	16,531	185.56
Flathead	192,150	99,917	2,206,698	182,885	552,882	279,535	105,413	3,619,480	19,200	188.51
Gallatin	172,013	46,787	307,116	154,296	131,307	807,761	39,886	1,659,166	16,124	102.90
Garfield	31,408	4,256	379,479	29,792	122,995	115,616	327,636	1,011,182	4,252	237.81
Glacier	56,925	22,401	557,544	30,652	82,624	278,450	28,490	1,057,086	5,277	199.56
Golden Valley	15,853	3,129	83,174	29,591	71,023	6,954	59,829	269,553	2,126	126.79
Granite	36,884	29,907	189,460	12,291	66,375	253,636	7,123	595,676	3,013	197.70
Hill	131,594	37,693	1,249,543	120,317	414,889	208,476	847,580	3,010,092	13,775	218.52
Jefferson	52,511	43,208	226,928	42,099	92,467	1,800	5,698	464,711	4,133	112.44
Judith Basin	78,174	17,070	212,780	14,156	50,038	56,330	193,733	622,281	5,238	118.80
Lake	50,361	39,646	505,020	77,326	274,766	113,100	212,251	1,272,470	9,541	133.37
Lewis and Clark	97,523	174,003	937,252	325,032	351,452	801,066	29,915	2,716,243	18,224	149.05
Liberty	30,350	5,923	109,236	18,967	29,967	20,200	175,214	389,857	2,198	177.37
Lincoln	125,969	41,316	347,010	49,642	127,198	145,800	4,274	841,209	7,089	118.66
Madison	86,426	39,547	294,505	49,651	158,134	380,727	507,124	1,516,114	6,323	239.78
McCone	89,839	23,934	485,993	41,259	106,921	32,717	34,188	814,851	4,790	170.12
Meagher	24,444	14,890	67,219	19,053	51,746	117,000	29,915	324,267	2,272	142.72
Mineral	43,813	13,061	214,020	90,027	77,828	12,000	4,274	455,023	1,626	279.84
Missoula	273,453	154,347	1,441,437	283,643	779,888	491,410	65,527	3,489,705	21,782	160.21
Musselshell	61,759	53,704	434,430	101,410	442,354	----	123,932	1,217,589	7,242	168.13
Park	124,865	34,991	518,814	43,465	260,267	177,827	92,593	1,252,822	10,922	114.71
Petroleum	25,554	4,530	38,436	50,389	59,434	38,897	42,735	259,975	2,045	127.13
Phillips	115,155	35,876	109,854	50,432	171,590	48,846	347,579	879,332	8,208	107.13
Pondera	81,565	16,811	125,406	37,724	92,269	126,082	52,707	532,564	6,964	76.47
Powder River	36,871	3,120	274,126	34,904	155,894	—	334,759	839,674	3,909	214.80
Powell	74,441	31,599	623,806	74,303	302,968	121,292	34,188	1,262,597	6,202	203.58
Prairie	49,298	7,456	92,616	43,695	136,403	27,705	9,972	367,145	3,941	93.16
Ravalli	74,868	45,300	460,480	53,898	202,170	804,265	384,616	2,025,597	10,315	196.37
Richland	80,674	18,984	790,840	37,765	213,673	137,359	900,287	2,179,582	9,633	226.26
Roosevelt	101,026	20,443	1,502,384	99,413	398,607	24,865	615,386	2,762,124	10,672	258.82
Rosebud	85,523	9,057	457,833	79,670	135,279	289,642	173,790	1,230,794	7,347	167.52
Sanders	74,856	21,899	614,296	44,935	121,679	71,966	331,910	1,281,541	5,692	225.15
Sheridan	65,210	29,408	1,275,962	75,946	574,727	19,796	1,109,689	3,150,738	9,869	319.26
Silver Bow	180,176	538,254	10,193,517	1,526,510	5,611,057	550,765	7,123	18,607,402	56,969	326.62
Stillwater	83,352	24,233	455,430	29,355	144,988	25,364	150,997	913,719	6,253	146.12
Sweet Grass	43,673	21,677	146,446	41,613	41,420	43,370	65,527	403,726	3,944	102.36
Teton	110,247	37,856	118,895	4,686	33,679	378,051	105,413	788,827	6,068	130.00
Toole	123,704	33,208	239,122	74,082	123,196	56,245	88,319	737,876	6,714	109.90
Treasure	8,235	1,535	60,601	9,315	55,673	13,950	89,744	239,053	1,661	143.92
Valley	134,439	73,508	579,086	6,296	444,748	139,464	464,388	1,841,929	11,181	164.74
Wheatland	55,239	11,551	692,313	33,200	84,192	394,364	51,282	1,322,141	3,751	352.48
Wibaux	45,165	6,150	271,658	60	87,834	28,484	200,855	640,206	2,767	231.37
Yellowstone	336,847	219,352	2,427,198	252,560	892,790	1,062,836	327,636	5,519,219	30,785	179.28
Statewide			4,851,027			1,296,503		6,147,530		11.44
TOTAL	$5,567,387	$3,038,006	$50,628,096	$6,007,235	$20,031,328	$12,582,209	$14,245,045	$112,099,306	537,554	208.54

a/ Compiled from County Clerk and Recorder's Annual Reports
b/ Compiled from County Clerk and Recorder's Annual Reports and from State Department of Public Welfare Expenditures
c/ From State WPA Statistics
d/ Compiled from data furnished by the National Emergency Council
e/ From data compiled by State Department of Public Welfare
f/ Compiled from data furnished by the Federal Emergency Administration of Public Works
g/ Estimated expenditures based on number of emergency grants by counties during 1938 and total grants to June 30, 1939

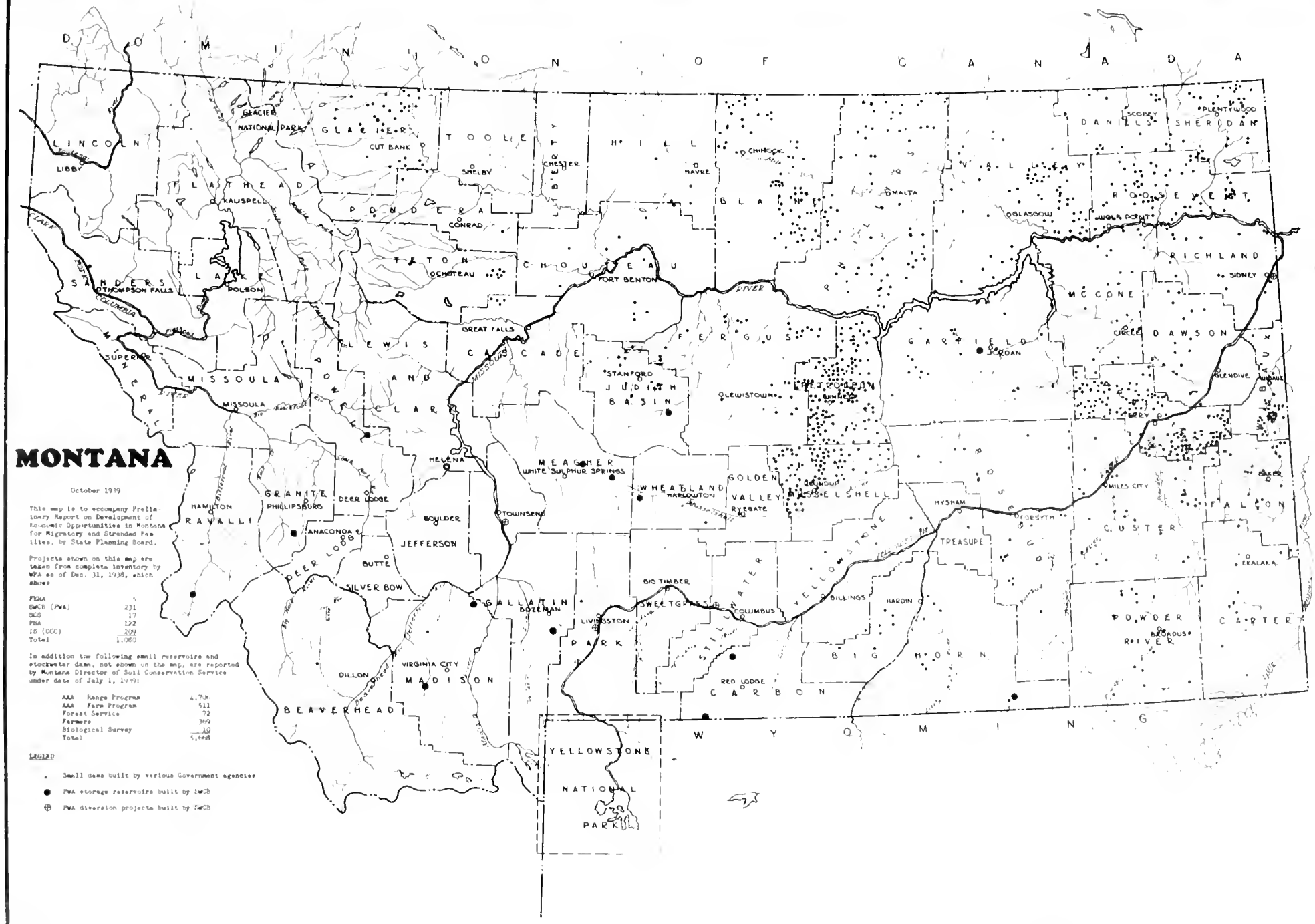
APPENDIX TABLE VI.--PER CAPITA P.W.A. EXPENDITURES (LOANS AND GRANTS) IN MONTANA COUNTIES FROM THE DATE OF INCEPTION THROUGH JUNE 30, 1939

	Loans	Grants	Total Expenditures	Population (1930)	Expenditures Per capita
Beaverhead	$ 175,000	$ 226,569	$ 401,569	6,654	$ 60.35
Big Horn	-	318,776	318,776	8,543	37.31
Blaine	-	114,105	114,105	9,006	12.67
Broadwater	537,000	421,712	958,712	2,738	350.15
Carbon	62,700	112,792	175,492	12,571	13.96
Carter	25,500	35,342	60,842	4,136	14.71
Cascade	169,000	765,759	934,759	41,146	22.72
Chouteau	31,500	116,057	147,557	8,635	17.06
Custer	209,300	106,314	315,614	11,242	28.08
Daniels	-	14,727	14,727	5,553	2.65
Dawson	-	5,770	5,770	9,881	.58
Deer Lodge	439,500	218,457	657,957	16,293	40.38
Fallon	-	14,768	14,768	4,568	3.23
Fergus	-	110,545	110,545	16,531	6.69
Flathead	4,600	279,535	285,135	19,200	14.85
Gallatin	573,950	807,761	1,381,711	16,124	85.69
Garfield	50,000	115,616	165,616	4,252	38.95
Glacier	-	278,450	278,450	5,297	52.57
Golden Valley	-	6,954	6,954	2,126	3.27
Granite	284,000	253,636	537,636	3,013	178.44
Hill	232,000	208,476	440,476	13,775	39.98
Jefferson	3,900	1,800	5,700	4,133	1.38
Judith Basin	54,000	56,330	110,330	5,238	21.06
Lake	32,500	113,100	145,600	9,541	15.26
Lewis and Clark	1,138,600	801,066	1,939,666	18,224	106.43
Liberty	35,000	20,200	55,200	2,198	25.11
Lincoln	44,790	145,800	190,590	7,089	26.88
Madison	414,000	380,727	794,727	6,323	125.69
McCone	46,604	32,717	79,321	4,790	16.56
Meagher	143,000	117,000	260,000	2,272	114.44
Mineral	-	12,000	12,000	1,626	7.38
Missoula	99,000	491,410	590,410	21,782	26.65
Musselshell	-	-	-	7,242	-
Park	90,000	177,827	267,827	10,922	24.52
Petroleum	-	38,897	38,897	2,045	19.02
Phillips	-	18,846	18,846	8,208	2.30
Pondera	87,000	126,082	213,082	6,964	30.60
Powder River	-	-	-	3,999	-
Powell	142,000	121,292	263,292	6,202	42.45
Prairie	-	27,705	27,705	3,941	7.03
Ravalli	440,000	804,265	1,244,265	10,315	12.06
Richland	90,900	137,359	228,259	9,633	23.69
Roosevelt	67,200	24,865	92,065	10,672	8.63
Rosebud	-	289,642	289,642	7,347	39.42
Sanders	28,500	71,966	100,466	5,692	17.65
Sheridan	6,884	19,796	26,680	9,369	2.70
Silver Bow	243,500	550,765	794,265	56,969	13.94
Stillwater	31,000	25,364	56,364	6,253	9.01
Sweet Grass	109,000	43,370	152,370	3,944	38.63
Teton	-	378,051	378,051	6,068	62.30
Toole	81,910	56,245	138,155	6,714	20.58
Treasure	-	13,950	13,950	1,661	8.40
Valley	125,000	139,464	264,464	11,181	23.66
Wheatland	427,000	394,364	821,364	3,751	218.97
Wibaux	-	28,484	28,484	2,767	10.29
Yellowstone	517,000	1,062,836	1,579,836	30,785	51.32
Statewide	1,910,700	1,296,503	3,207,203	537,554	5.97
TOTAL	$9,203,038	$12,582,203	$21,785,241	537,554	$40.53

APPENDIX TABLE VII

TAXABLE VALUATION, TOTAL ACCUMULATED TAX DELINQUENCY, AND TOTAL ACCUMULATED TAX DELINQUENCY IN PER CENT OF TAXABLE VALUATION, JUNE 30, 1938

County	Taxable valuation	Total accumulated tax delinquency	Pct. total delinquency is of taxable valuation
Beaverhead	$ 4,843,542	$ 521,290.00	$ 10.48
Big Horn	4,640,611	482,909.87	10.38
Blaine	4,304,158	1,041,095.47	23.55
Broadwater	2,620,653	432,171.90	16.32
Carbon	5,809,005	833,421.85	14.30
Carter	2,311,518	416,260.42	18.70
Cascade	27,894,193	857,742.29	3.18
Chouteau	6,503,433	447,799.76	7.44
Custer	6,222,827	528,902.16	8.44
Daniels	2,594,146	1,148,640.36	42.65
Dawson	5,585,855	624,388.70	11.03
Deer Lodge	8,993,105	122,442.83	1.36
Fallon	2,608,666	682,203.99	26.09
Fergus	8,936,602	1,215,617.19	13.49
Flathead	9,960,000	398,251.98	4.04
Gallatin	11,451,480	597,090.83	5.17
Garfield	1,626,650	1,036,960.52	62.72
Glacier	6,502,000	279,409.39	4.13
Golden Valley	1,810,532	440,380.53	23.82
Granite	3,105,633	44,386.66	1.44
Hill	7,134,031	870,445.07	12.20
Jefferson	3,642,414	85,825.30	2.33
Judith Basin	4,557,039	268,441.23	5.73
Lake	5,011,400	496,158.41	12.36
Lewis and Clark	15,249,885	202,556.87	1.35
Liberty	1,903,000	261,442.36	13.74
Lincoln	4,552,976	69,072.00	1.52
Madison	4,113,213	93,395.25	2.24
McCone	2,464,815	678,114.63	27.51
Meagher	2,650,415	100,439.18	3.79
Mineral	2,332,783	17,775.21	.76
Missoula	12,823,332	348,614.04	2.72
Musselshell	2,940,222	933,968.35	31.76
Park	6,673,689	250,164.20	3.75
Petroleum	970,698	454,779.93	46.85
Phillips	4,197,719	1,203,408.43	28.67
Pondera	4,814,309	244,113.83	5.07
Powder River	1,802,133	243,744.69	13.52
Powell	5,208,322	156,660.22	3.01
Prairie	2,547,880	174,277.30	6.84
Ravalli	3,981,746	267,808.38	6.72
Richland	3,996,291	505,363.80	12.65
Roosevelt	4,579,776	1,124,717.52	24.56
Rosebud	5,637,292	1,180,765.70	20.94
Sanders	5,849,990	60,391.30	1.03
Sheridan	3,741,888	1,438,869.98	38.45
Silver Bow	28,850,167	1,654,280.64	5.73
Stillwater	3,794,819	239,159.81	6.31
Sweet Grass	3,194,239	64,930.97	2.03
Teton	5,153,296	317,501.91	6.16
Toole	5,774,461	894,917.04	15.51
Treasure	1,242,045	326,486.62	26.29
Valley	5,613,702	1,718,670.07	30.61
Wheatland	3,210,525	315,629.95	9.83
Wibaux	1,563,731	170,864.04	10.93
Yellowstone	19,001,457	351,448.42	1.85
STATE TOTALS	$ 329,070,380	$ 29,937,069.19	$ 9.10



MONTANA

October 1939

This map is to accompany Preliminary Report on Development of Economic Opportunities in Montana for Migratory and Stranded Families, by State Planning Board.

Projects shown on this map are taken from complete inventory by WPA as of Dec. 31, 1938, which above

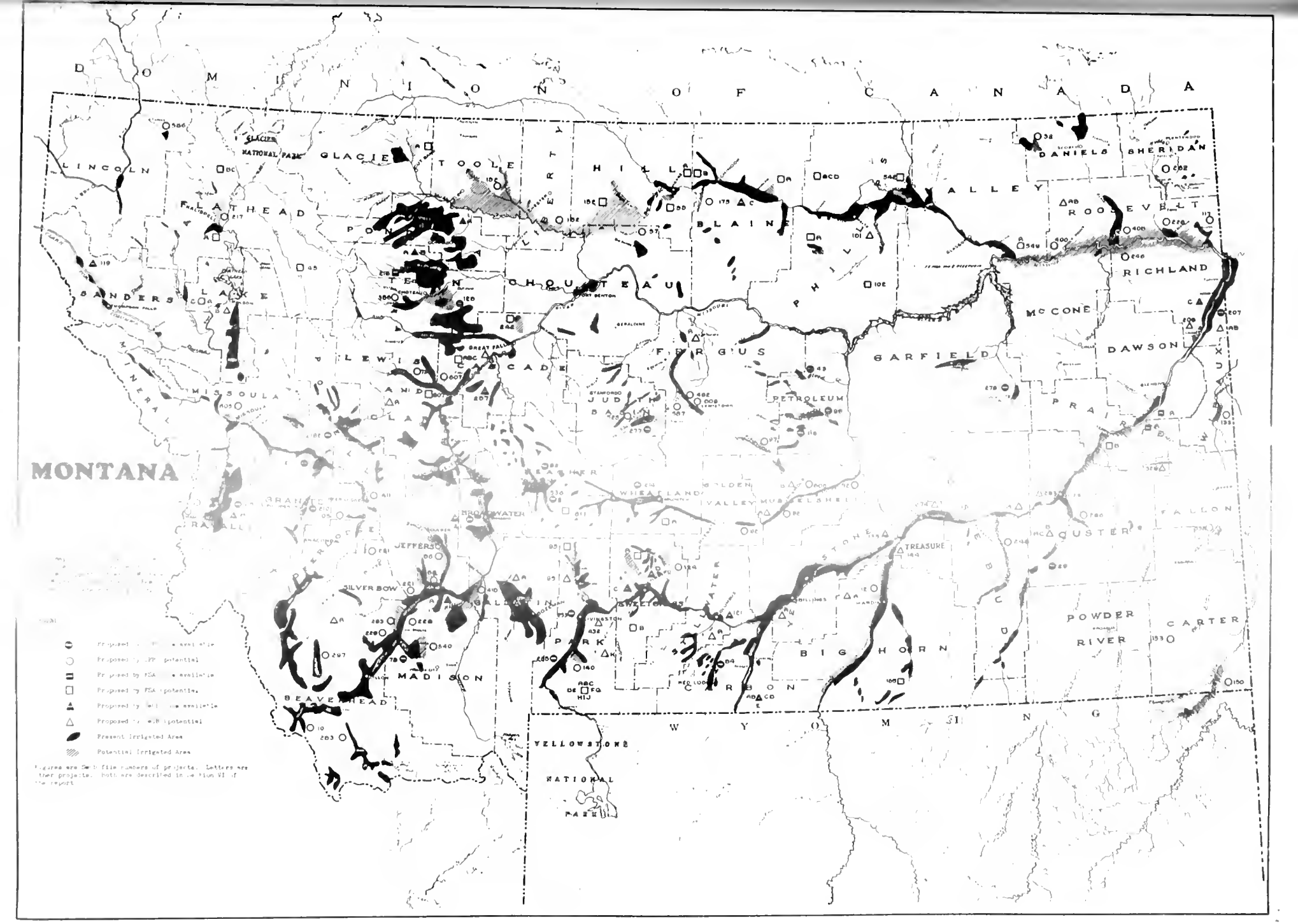
FERA	4
SWCB (PWA)	231
SCS	17
FSA	122
IS (CCC)	297
Total	1,080

In addition the following small reservoirs and stockwater dams, not shown on the map, are reported by Montana Director of Soil Conservation Service under date of July 1, 1939:

AAA Range Program	4,734
AAA Farm Program	511
Forest Service	72
Farmers	349
Biological Survey	10
Total	5,668

LEGEND

- Small dams built by various Government agencies
- PWA storage reservoirs built by SWCB
- PWA diversion projects built by SWCB



DOMINION OF CANADA
MONTANA
WYOMING
LINCOLN
FLATHEAD
GLACIER
GLACIER NATIONAL PARK
TOOLE
HILL
BLAINE
VALLEY
DANIELS
SHERIDAN
ROOSEVELT
RICHLAND
McCONE
DAWSON
GARFIELD
PHILLIPS
CHOUTEAU
PONDERA
TETON
LAKE
SANDERS
MISSOULA
LEWIS AND CLARK
CASCADE
FERGUS
JUDITH BASIN
PETROLEUM
PRAIRIE
WIBAUX
GRANITE
RAVALLI
BROADWATER
JEFFERSON
SILVER BOW
GALLATIN
MADISON
BEAVERHEAD
PARK
SWEETGRASS
STILLWATER
CARBON
BIG HORN
TREASURE
CUSTER
FALLON
POWDER RIVER
CARTER
YELLOWSTONE NATIONAL PARK
Present Irrigated Area
Potential Irrigated Area